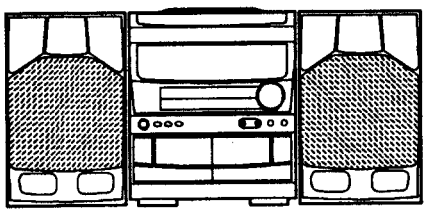
495

aiwa

aiwa SERVICE

CX-NV800
CX-NV820
CX-NAP1MK3



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM-3MK2 PR4N
- BASIC CD MECHANISM : 4ZG-1 ADNM
- TYPE: 800:V
  820,NAP1MK3:EZ

SERVICE MANUAL

CD-CASSEIVER	SPEAKER	REMOTE CONTROLLER
CX-NV800 (TYPE: V)	SX-FNV800	RC-T501
CX-NV820 (TYPE: EZ)		
CX-NAP1MK3 (TYPE: EZ)		

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No.09-965-128-10T

495

S/M Code No. 09-968-147-3FE

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SPECIFICATIONS

<FM Tuner section>

Tuning range	EZ : 87.5 MHz to 108 MHz V : FM1 (OIRT) 65 MHz to 74 MHz (10kHz step) FM (CCIR) 87.5 MHz to 108 MHz (50 kHz step)
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM (MW) Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW Tuner section> <EZ, V only>

Tuning range	144 kHz ~ 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output *	50 W + 50 W EZ : (6 ohms, T.H.D. 1%, 1 kHz/DIN 45500) V : (6 ohms, T.H.D. 1%, 1 kHz) **Reference : 70 W + 70 W** EZ : (6 ohms, T.H.D. 10%, 1 kHz/DIN 45324) V : (6 ohms, T.H.D. 10%, 1 kHz) DIN MUSIC POWER : 100 W +100 W (EZ only)
* (without connecting to the SURROUND SPEAKERS)	
Total harmonic distortion	0.1% (25 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 820EZ : 150 mV (adjustable) NAP1MK3EZ : 230 mV (adjustable) V : 250 mV (adjustable) MIC 1, MIC 2 : 820EZ, V : 1 mV (10 kohms) NAP1MK3EZ : 1.7 mV (10 kohms)
Outputs	SUPER WOOFER : 1.7 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS : accept speakers of 16 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	CrO_2 tape : 50 Hz – 16000 Hz Normal tape : 50 Hz –15000 Hz
Signal-to-noise ratio	60 dB (Dolby B NR ON, CrO_2 tape peak level)
Recording system	AC bias
Heads	Deck 1 : Playback head x1 Deck 2 : Recording/playback/ erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	83 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<Speaker system SX-FNV800>

Cabinet type	3 way, bass reflex with surround speaker (magnetic sealed type)
Speakers	Woofer : 140 mm (5⅝ in.) cone type Tweeter : 80 mm (3¼ in.) cone type Super tweeter : 20 mm (13/16 in.) ceramic type Surround speaker : 80 mm (3¼ in.) cone type
Impedance	Front speaker : 6 ohms Surround speaker : 16 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	235 x 302 x 270 mm (9⅜ x 12 x 10¾ in.)
Weight	3.8 kg (8 lbs 6 oz.)

<General>

Power requirements	230 V AC, 50 Hz
Power consumption	330 W
Dimensions of main unit (W x H x D)	260 x 307 x 345 mm (10¼ x 12⅛ x 13⅝ in.)
Weight of main unit	8.0 kg (17 lbs 10 oz.)

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound, Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

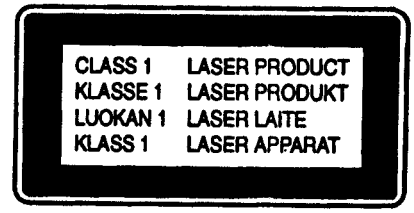
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

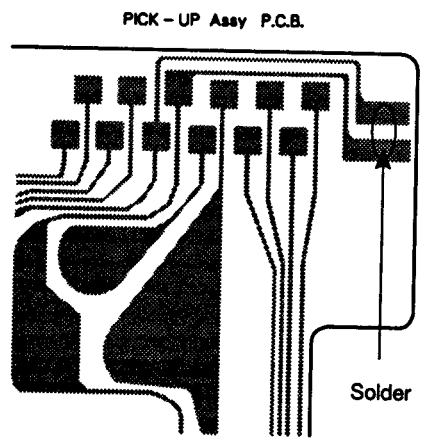


Precaution to replace Optical block

(KSS – 213B)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	S6-804-060-030		IC,LB9051A
	86-NF5-601-010		C-IC,LC866432V-5A45<V>
	86-NF5-690-010		C-IC,LC866448W-5B86<NAP1MK3,820EZ>
	87-070-083-019		IC,GP1U281X
	87-A20-060-019		IC,STK-419-110
	87-070-121-010		IC,HA12185NT
	87-070-232-019		IC,BA3834S
	87-017-915-089		IC,BU4094BCF
	87-001-874-019		IC,HA12134A
	87-A20-107-019		IC,BA3836
	87-017-804-019		IC,BU4052BC
	87-A20-056-019		IC,BA3880S
	87-017-914-019		IC,BU4094 BC
	87-017-888-089		IC,NJM4558MD
	87-070-184-040		IC,M65846FP-600D
	87-A20-069-049		C-IC,BA3842F
	87-070-127-119		IC,LC72131
	87-017-714-119		IC,LA1836
	87-A20-105-049		IC,BU1921FS<NAP1MK3,820EZ>
	87-001-792-089		IC,NJM2100M<NAP1MK3,820EZ>
TRANSISTOR			
	87-026-463-089		TR,2SA933S(RS)
	89-213-702-019		TR,2SB1370E
	89-113-187-089		TR,2SA1318TU
	87-026-610-089		TR,KTC3198GR
	89-332-665-089		TR,2SC3266GR
	89-327-126-089		C-TR,2SC2712BL
	89-337-221-389		C-TR,2SC3722K
	89-327-125-088		C-TR,2SC2712GR
	89-111-625-089		C-TR,2SA1162GR
	87-026-210-089		C-TR,DTC144EK T147
	87-026-211-089		C-TR,DTA144EK T147
	89-333-266-089		C-TR,2SC3326B
	87-026-609-089		TR, KTA1266GR
	89-109-705-089		TR,2SA970GR
	89-026-210-088		C-TR,DTC144EK
	87-026-226-089		C-TR,DTA143EK
	89-502-466-089		TR FET 2SK246-BL (TPE2)
	87-026-228-089		C-TR,DTA124EK
	89-112-965-089		TR,2SA1296GR
	89-333-317-089		TR,2SC3331T
	89-109-521-089		TR,2SA952K
	89-406-555-089		TR,2SD655E
	87-026-238-089		C-TR,DTC144WK
	87-026-214-089		TR,DTA114YS
	89-327-143-089		C-TR,2SC2714 (O)
	87-026-269-089		TR,DTA114ES
	89-421-141-289		C-TR,2SD2114K,UV
	89-505-434-589		C-FET,2SK543(4/5)
DIODE			
	87-A40-116-069		DIODE,RS403L-B-D-51
	87-A40-115-069		DIODE,RS603M
	87-070-274-089		DIODE,1N4003 SEM
	87-020-027-089		C-DIODE,1SS184
	87-020-125-089		C-DIODE,1SS181
	87-017-437-089		DIODE,1N4148M
	87-017-174-089		ZENER,HZS11A3L
	87-017-147-089		ZENER,HZS33-2
	87-017-978-089		DIODE,1N4003
	87-A40-134-089		DIODE,G2B
	87-A40-184-090		DIODE,RK34
	87-A40-199-089		ZENER,UZL6H2
	87-A40-202-089		ZENER,UZ5.1B SB
	87-A40-200-089		ZENER,UZL11L3
	87-020-331-089		C-DIODE,DAN202K
	87-017-123-089		ZENER,HZS11A3L
	87-020-330-089		C-DIODE,DAP202K
	87-017-148-089		ZENER,HZS6A1L
	87-001-559-089		DIODE,1SS131
	87-A40-211-089		ZENER,UZ36BSA
	87-A40-197-089		ZENER,UZL6L1
	87-A40-198-089		ZENER,UZL6M1
	87-020-465-089		DIODE,1SS133
	87-A40-207-089		ZENER,UZ11BSC
MAIN C.B			
C101	87-016-474-099		CAP,E 3300-50
C102	87-016-474-099		CAP,E 3300-50
C104	87-010-235-089		CAP,E 470-16 SME
C105	87-010-235-089		CAP,E 470-16 SME
C106	87-010-409-089		CAP,E 220-50 SME
C107	87-010-247-089		CAP,E 100-50 SME
C108	87-010-247-089		CAP,E 100-50 SME
C109	87-010-263-089		CAP,E 100-10 SME 5X11
C112	87-010-382-089		CAP,E 22-25 SME
C113	87-010-403-089		CAP,E 3.3-50 SME
C116	87-012-140-089		C-CAP,S 470P-50 CH
C121	87-010-196-089		C-CAP,S 0.1-25 F
C122	87-010-196-089		C-CAP,S 0.1-25 F
C123	87-018-209-089		CAP,TC-U 0.1-50 F
C124	87-010-196-089		C-CAP,S 0.1-25 F
C145	87-010-186-089		C-CAP,4700P-50B
C146	87-010-186-089		C-CAP,4700P-50B
C152	87-010-260-089		CAP,E 47-25 SME
C171	87-016-565-099		CAP,E 4700-25(JAM1)
C172	87-016-565-099		CAP,E 4700-25(JAM1)
C173	87-010-196-089		C-CAP,S 0.1-25 F
C174	87-010-196-089		C-CAP,S 0.1-25 F
C175	87-010-196-089		C-CAP,S 0.1-25 F
C176	87-015-785-089		C-CAP,0.1-25 F
C220	87-010-194-089		C-CAP,S 0.047-25 F
C221	87-010-544-089		CAP,E 0.1-50 SME
C222	87-010-544-089		CAP,E 0.1-50 SME
C223	87-010-187-089		C-CAP,S 5600P-50 B
C224	87-010-187-089		C-CAP,S 5600P-50 B
C225	87-012-179-089		C-CAP,S 1200P-50 B
C226	87-012-179-089		C-CAP,S 1200P-50 B
C227	87-010-405-089		CAP,E 10-50 SME
C228	87-010-405-089		CAP,E 10-50 SME
C229	87-010-402-089		CAP,E 2.2-50 SME
C230	87-010-402-089		CAP,E 2.2-50 SME
C231	87-010-147-089		C-CAP,S 3P-50 CH
C232	87-018-098-089		CAP,TC-U 3.3P-50 SL
C233	87-010-196-089		C-CAP,S 0.1-25 F
C234	87-010-196-089		C-CAP,S 0.1-25 F
C235	87-010-196-089		C-CAP,S 0.1-25 F
C236	87-010-196-089		C-CAP,S 0.1-25 F
C239	87-018-134-089		CAP,TC-U 100P-50B
C240	87-018-134-089		CAP,TC-U 100P-50B
C241	87-010-197-089		C-CAP,S 0.01-25 B<NAP1MK3,820EZ>
C242	87-010-197-089		C-CAP,S 0.01-25 B<NAP1MK3,820EZ>
C243	87-010-318-089		C-CAP,S 47P-50CH<V>
C243	87-010-322-089		C-CAP,S100P-50CH<NAP1MK3,820EZ>
C244	87-010-318-089		C-CAP,S 47P-50CH<V>
C244	87-010-322-089		C-CAP,S100P-50CH<NAP1MK3,820EZ>
C249	87-018-209-089		CAP,TC-U 0.1-50 F
C250	87-A10-200-010		CAP,E 10-100 PP
C255	87-010-178-089		C-CAP,S 1000P-50 B
C256	87-010-178-089		C-CAP,S 1000P-50 B<V>
C260	87-015-785-089		C-CAP,0.1-25 F
C301	87-010-318-089		C-CAP,S 47P-50 CH
C302	87-010-318-089		C-CAP,S 47P-50 CH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C303	87-012-157-089		C-CAP,S 330P-50 CH
C304	87-012-157-089		C-CAP,S 330P-50 CH
C305	87-012-145-089		C-CAP,S 270P-50 CH
C306	87-012-145-089		C-CAP,S 270P-50 CH
C307	87-010-196-089		C-CAP,S 0.1-25 F
C311	87-010-198-089		C-CAP,S 0.022-25 B
C312	87-010-198-089		C-CAP,S 0.022-25 B
C313	87-010-182-089		C-CAP,S 2200P-50 B
C314	87-010-182-089		C-CAP,S 2200P-50 B
C315	87-010-180-089		C-CAP,S 1500P-50 B
C316	87-010-180-089		C-CAP,S 1500P-50 B
C317	87-012-142-089		C-CAP,S 0.33-16 F
C318	87-012-142-089		C-CAP,S 0.33-16 F
C319	87-012-141-089		C-CAP,S 0.22-16 F
C320	87-012-141-089		C-CAP,S 0.22-16 F
C321	87-010-196-089		C-CAP,S 0.1-25 F
C322	87-010-196-089		C-CAP,S 0.1-25 F
C324	87-010-260-089		CAP,E 47-25 SME
C325	87-010-370-089		CAP,E 330-6.3 SME
C326	87-010-196-089		C-CAP,S 0.1-25 F
C330	87-010-401-089		CAP,E 1-50 SME
C332	87-015-785-089		C-CAP,0.1-25 F
C335	87-010-805-089		C-CAP,S 1-16F
C336	87-010-805-089		C-CAP,S 1-16F
C337	87-010-196-089		C-CAP,S 0.1-25 F
C338	87-010-196-089		C-CAP,S 0.1-25 F
C339	87-010-196-089		C-CAP,S 0.1-25 F
C340	87-015-785-089		C-CAP,0.1-25 F
C351	87-012-154-089		C-CAP,S 150P-50 CH
C352	87-012-154-089		C-CAP,S 150P-50 CH
C451	87-012-140-089		C-CAP,S 470P-50 CH
C452	87-012-140-089		C-CAP,S 470P-50 CH
C453	87-010-178-089		C-CAP,S 1000P-50 B
C454	87-010-175-089		C-CAP,560P-50SL
C455	87-010-178-089		C-CAP,S 1000P-50 B
C456	87-010-408-089		CAP,E 47-50 SME
C457	87-010-197-089		C-CAP,S 0.01-25 B
C458	87-010-183-089		C-CAP,S 2700P-50 B
C459	87-010-183-089		C-CAP,S 2700P-50 B
C460	87-010-183-089		C-CAP,S 2700P-50 B
C470	87-010-196-089		C-CAP,S 0.1-25 F
C501	87-010-179-089		C-CAP,S 1200P-50 B
C502	87-010-179-089		C-CAP,S 1200P-50 B
C503	87-012-155-089		C-CAP,S 180P-50 CH
C504	87-012-155-089		C-CAP,S 180P-50 CH
C515	87-010-545-089		CAP,E 0.22-50 SME
C516	87-010-545-089		CAP,E 0.22-50 SME
C519	87-015-785-089		C-CAP,0.1-25 F
C521	87-010-196-089		C-CAP,S 0.1-25 F
C522	87-010-318-089		C-CAP,S 47P-50 CH
C523	87-010-197-089		C-CAP,S 0.01-25 B
C524	87-010-402-089		CAP,E 2.2-50 SME
C525	87-010-184-089		C-CAP,S 3300P-50 B
C526	87-010-196-089		C-CAP,S 0.1-25 F
C527	87-010-401-089		CAP,E 1-50 SME
C528	87-010-401-089		CAP,E 1-50 SME
C529	87-010-384-089		CAP,E 100-25 SME
C530	87-010-197-089		C-CAP,S 0.01-25 B
C531	87-010-183-089		C-CAP,S 2700P-50 B
C532	87-010-194-089		C-CAP,S 0.047-25 F
C533	87-010-196-089		C-CAP,S 0.1-25 F
C534	87-010-263-089		CAP,E 100-10 SME 5X11
C535	87-010-401-089		CAP,E 1-50 SME
C536	87-010-401-089		CAP,E 1-50 SME
C537	87-010-545-089		CAP,E 0.22-50 SME
C540	87-010-196-089		C-CAP,S 0.1-25 F
C541	87-010-196-089		C-CAP,S 0.1-25 F
C542	87-010-405-089		CAP,E 10-50 SME
C543	87-010-546-089		CAP,E 0.33-50 SME
C544	87-010-546-089		CAP,E 0.33-50 SME

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C545	87-010-400-089		CAP,E 0.47-50 SME
C546	87-010-400-089		CAP,E 0.47-50 SME
C547	87-015-632-089		C-CAP,0.015-50 BK
C548	87-015-632-089		C-CAP,0.015-50 BK
C553	87-015-627-089		C-CAP,1000P-50 B
C554	87-015-627-089		C-CAP,1000P-50 B
C557	87-010-178-089		C-CAP,S 1000P-50 B
C558	87-010-178-089		C-CAP,S 1000P-50 B
C601	87-010-178-089		C-CAP,S 1000P-50 B
C602	87-010-178-089		C-CAP,S 1000P-50 B
C603	87-010-405-089		CAP,E 10-50 SME
C604	87-010-405-089		CAP,E 10-50 SME
C605	87-010-260-089		CAP,E 47-25 SME
C606	87-010-101-089		CAP,E 220-16 SME
C607	87-010-188-089		C-CAP,S 6800P-50 B
C608	87-010-188-089		C-CAP,S 6800P-50 B
C609	87-018-127-089		CAP,TC-U 470P-50 B
C610	87-018-127-089		CAP,TC-U 470P-50 B
C611	87-010-197-089		C-CAP,S 0.01-25 B
C612	87-010-197-089		C-CAP,S 0.01-25 B
C613	87-010-195-089		C-CAP,S 0.068-25 F
C614	87-010-195-089		C-CAP,S 0.068-25 F
C615	87-010-404-089		CAP,E 4.7-50 SME
C616	87-010-404-089		CAP,E 4.7-50 SME
C617	87-010-404-089		CAP,E 4.7-50 SME
C618	87-010-404-089		CAP,E 4.7-50 SME
C641	87-010-196-089		C-CAP,S 0.1-25 F
C642	87-010-196-089		C-CAP,S 0.1-25 F
C673	87-010-316-089		C-CAP,S 33P-50CH<NAP1MK3,820EZ>
C674	87-010-316-089		C-CAP,S 33P-50CH<NAP1MK3,820EZ>
C675	87-010-318-089		C-CAP,S 47P-50CH<NAP1MK3,820EZ>
C676	87-010-318-089		C-CAP,S 47P-50CH<NAP1MK3,820EZ>
C701	87-010-381-089		CAP,E 330-16 SME
C702	87-010-404-089		CAP,E 4.7-50 SME
C703	87-010-197-089		C-CAP,S 0.01-25 B
C704	87-010-197-089		C-CAP,S 0.01-25 B
C711	87-010-263-089		CAP,E 100-10 SME 5X11
C712	87-010-196-089		C-CAP,S 0.1-25 F
C722	87-010-152-089		C-CAP,S 8P-50 CH
C723	87-010-178-089		C-CAP,S 1000P-50 B
C725	87-010-178-089		C-CAP,S 1000P-50 B
C727	87-010-196-089		C-CAP,S 0.1-25 F
C728	87-010-248-089		CAP,E 220-10 SME
C735	87-018-134-089		CAP,TC-U 0.01-16 F
C770	87-010-405-089		CAP,E 10-50 SME
C771	87-010-405-089		CAP,E 10-50 SME
C772	87-010-194-089		C-CAP,S 0.047-25 F
C773	87-010-196-089		C-CAP,S 0.1-25 F
C774	87-010-263-089		CAP,E 100-10 SME 5X11
C775	87-010-405-089		CAP,E 10-50 SME
C776	87-010-197-089		C-CAP,S 0.01-25 B
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-089		CAP,E 1-50 SME
C779	87-010-401-089		CAP,E 1-50 SME
C780	87-010-197-089		C-CAP,S 0.01-25 B
C781	87-010-405-089		CAP,E 10-50 SME
C782	87-010-405-089		CAP,E 10-50 SME
C785	87-010-197-089		C-CAP,S 0.01-25 B
C786	87-010-197-089		C-CAP,S 0.01-25 B
C787	87-010-184-089		C-CAP,S 3300P-50 B
C788	87-010-184-089		C-CAP,S 3300P-50 B
C789	87-010-179-089		C-CAP,S 1200P-50 B K
C790	87-010-179-089		C-CAP,S 1200P-50 B
C791	87-010-401-089		CAP,E 1-50 SME
C792	87-010-182-089		C-CAP,S 2200P-50 B
C793	87-010-189-089		C-CAP,S 8200P-50 B
C794	87-010-408-089		CAP,E 47-50 SME
C795	87-010-194-089		C-CAP,S 0.047-25 F
C796	87-010-403-089		CAP,E 3.3-50 SME
C802	87-010-197-089		C-CAP,S 0.01-25 B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C803	87-018-134-089		CAP,TC-U 0.01-16 Y
C814	87-010-196-089		C-CAP,S 0.1-25 F
C815	87-018-134-089		CAP,TC-U 0.01-16 Y<V>
C817	87-010-197-089		C-CAP,S 0.01-25 B
C818	87-010-197-089		C-CAP,S 0.01-25 B
C819	87-010-197-089		C-CAP,S 0.01-25 B
C820	87-010-408-089		CAP,E 47-50 SME
C821	87-010-197-089		C-CAP,S 0.01-25 B
C823	87-010-197-089		C-CAP,S 0.01-25 B
C828	87-010-197-089		C-CAP,S 0.01-25 B
C829	87-010-197-089		C-CAP,S 0.01-25 B
C830	87-015-819-089		CHIP CAP 0.01
C835	87-010-197-089		C-CAP,S 0.01-25 B
C860	87-010-248-089		CAP,E 220-50 SME<NAP1MK3,820EZ>
C861	87-010-196-089		C-CAP,S 0.1-25 F<NAP1MK3,820EZ>
C862	87-010-182-089		C-CAP,S 2200P-50 B<NAP1MK3,820EZ>
C863	87-010-178-089		C-CAP,S 1000P-50 B<NAP1MK3,820EZ>
C864	87-010-315-089		C-CAP,S 27P-50 CH<NAP1MK3,820EZ>
C865	87-010-315-089		C-CAP,S 27P-50 CH<NAP1MK3,820EZ>
C866	87-010-197-089		C-CAP,S 0.01-25 B<NAP1MK3,820EZ>
C867	87-010-318-089		C-CAP,S 47P-50 CH<NAP1MK3,820EZ>
C868	87-010-405-089		CAP,E 10-50 SME<NAP1MK3,820EZ>
C869	87-010-196-089		C-CAP,S 0.1-25 F<NAP1MK3,820EZ>
C871	87-010-805-089		C-CAP,S 1-16 F<NAP1MK3,820EZ>
C872	87-010-197-089		C-CAP,S 0.01-25 B<NAP1MK3,820EZ>
C901	87-010-197-089		C-CAP,S 0.01-25 B
C902	87-010-196-089		C-CAP,S 0.1-25 F
C903	87-010-119-089		CAP,TC-U 100P-50 B
C942	87-010-154-089		C-CAP,S 10P-50 CH
C946	87-010-401-089		CAP,E 1-50 SME
C952	87-010-197-089		C-CAP,S 0.01-25 B
C957	87-010-315-089		C-CAP,S 27P-50 CH
C958	87-010-197-089		C-CAP,S 0.01-25 B
C960	87-010-196-089		C-CAP,S 0.1-25 F
C961	87-010-150-089		C-CAP,S 6P-50 CH
C987	87-018-134-089		CAP,TC-U 0.01-16 Y
C990	87-010-197-089		C-CAP,S 0.01-25 B
C993	87-018-134-089		CAP,TC-U 0.01-16 Y
C995	87-010-197-089		C-CAP,S 0.01-25 B
C999	87-010-196-089		C-CAP,S 0.1-25 F
CF801	87-008-423-019		CF,SFE10.7MS3G-A
CF802	82-785-747-019		CF,MS2GHY,R
FR121	87-029-060-089		RES,FUSE 33-1/4W J
FR122	87-029-060-089		RES,FUSE 33-1/4W J
J252	87-A60-024-019		JACK 6.3BLK W/S WKM
J253	87-099-802-019		JACK,PIN 3P BRW
J254	87-033-240-019		TERMINAL,SP 4P32SV1-05
J652	87-099-741-019		JACK,PIN 2P (JT)
J801	87-033-241-019		TERMINAL,ANT AJ2039<NAP1MK3,820EZ>
J801	87-033-239-019		TERMINAL,HSP-154-2<V>
L101	87-003-383-019		COIL,1UH-S
L102	87-003-383-019		COIL,1UH-S
L403	87-007-341-019		COIL,TRAP 85K
L404	87-007-341-019		COIL,TRAP 85K
L451	87-007-342-019		COIL,OSC 85K BIAS
L701	87-A50-027-019		COIL,1 POLE MPX(TOK)
L702	87-A50-027-019		COIL,1 POLE MPX(TOK)
L721	87-A50-015-019		COIL,FM DET(TOK)
L742	87-A90-051-019		FLTR,CFAZ-450(TOK)
L743	87-005-564-089		C-COIL,2.2UH<NAP1MK3,820EZ>
L770	87-003-102-089		COIL,10UH
L832	87-005-847-089		COIL,2.2UH(CECS)
L850	87-005-847-089		COIL,2.2UH(CECS)<NAP1MK3,820EZ>
L941	87-A50-020-019		COIL,ANT LW
L942	87-A50-019-019		COIL,OSC LW
L981	86-NF4-665-019		AM PACK 1(TOK)
⚠PR110	87-026-681-089		PROTECTOR,5A 60V 491
⚠PR111	87-026-681-089		PROTECTOR,5A 60V 491
⚠PR112	87-026-689-089		PROTECTOR,1A 60V 491
R105	87-022-600-089		RES,M/F 0.1-2W J
R106	87-022-600-089		RES,M/F 0.1-2W J
RY101	87-045-361-019		RELAY,DH12D2-OS(M)-2<V>
RY101	87-A90-143-019		RELAY,DG12D2-OS(M)<NAP1MK3,820EZ>
RY102	87-045-382-019		RELAY,OUAZ-SH-112L
SFR301	87-024-174-089		SFR33K DIA6 V
SFR302	87-024-174-089		SFR33K DIA6 V
SFR303	87-024-174-089		SFR33K DIA6 V
SFR304	87-024-174-089		SFR33K DIA6 V
SFR305	87-024-175-089		SFR,47K DIA6 V
SFR306	87-024-175-089		SFR,47K DIA6 V
SFR451	87-024-175-089		SFR,47K DIA6 V
SFR452	87-024-175-089		SFR,47K DIA6 V
SFR722	87-024-171-089		SFR 4.7K DIA6 V
TC701	87-011-253-089		TRIMER,30P LAR
TC942	87-011-253-089		TRIMER,30P LAR
TH241	87-A90-157-089		C-THMS,4.7K
VR651	82-NF5-660-019		VR 50K BX2 RK14K 12A
W101	85-NF5-628-019		F-CABLE 7P-2.5
W301	86-NF5-618-019		CONN ASSY,8P RPB
W604	85-NF5-617-019		CABLE,FFC 6P-1.25
X703	84-508-618-019		VIB,CER CSB 456 F/5
X721	87-030-372-019		VIB,XTAL 7.2MHZ
X850	89-KT1-608-019		VIB,XTAL 4.332MHZ<NAP1MK3,820EZ>

FRONT C.B

C201	87-015-698-049		CAP,E 4.7-50 7L
C202	87-015-698-049		CAP,E 4.7-50 7L
C203	87-010-392-049		CAP,E 33-35 SME
C204	87-010-401-049		CAP,E 1-50 SME
C205	87-010-263-049		CAP,E 100-10
C206	87-A10-116-049		CAP,E 330-6.3 GAS
C207	87-010-494-049		CAP,E 1-50 GAS
C208	87-010-196-089		C-CAP,S 0.1-25 F
C209	87-010-316-089		C-CAP,S 33P-50 CH
C210	87-010-154-089		C-CAP,S 10P-50 CH
C211	87-015-689-049		CAP,E 10-35 7L
C212	87-010-498-049		CAP,E 10-16 GAS
C213	87-010-196-089		C-CAP,S 0.1-25 F
C214	87-010-196-089		C-CAP,S 0.1-25 F
C215	87-010-196-089		C-CAP,S 0.1-25 F
C223	87-010-178-089		C-CAP,S 1000P-50 B
C250	87-010-178-089		C-CAP,S 1000P-50 B
C251	87-010-196-089		C-CAP,S 0.1-25 F
C381	87-010-196-089		C-CAP,S 0.1-25 F
C382	87-010-196-089		C-CAP,S 0.1-25 F
C383	87-010-196-089		C-CAP,S 0.1-25 F
C384	87-010-196-089		C-CAP,S 0.1-25 F
C385	87-010-322-089		C-CAP,S 100P-50 CH
C389	87-010-196-089		C-CAP,S 0.1-25 F
C401	87-010-196-089		C-CAP,S 0.1-25 F
C402	87-010-196-089		C-CAP,S 0.1-25 F
C501	87-010-553-049		CAP,E 47-16 GAS
C602	87-010-322-089		C-CAP,S 100P-50 CH
C603	87-010-177-089		C-CAP,S 820P-50 SL
C604	87-010-186-089		C-CAP,S 4700P-50 B
C605	87-010-491-049		CAP,E 0.22-50 GAS
C606	87-010-196-089		C-CAP,S 0.1-25 F
C607	87-010-321-089		C-CAP,S 82P-50 CH
C608	87-010-112-049		CAP,E 100-16
C609	87-010-196-089		C-CAP,S 0.1-25 F
C611	87-010-248-049		CAP,E 220-10 SME
C612	87-010-322-089		C-CAP,S 100P-50 CH
C613	87-010-196-089		C-CAP,S 0.1-25 F
C630	87-010-498-049		CAP,E 10-16 GAS
C640	87-010-406-049		CAP,E 22-50 SME
C646	87-010-196-089		C-CAP,S 0.1-25 F
C651	87-010-152-089		C-CAP,S 8P-50 CH
C652	87-010-152-089		C-CAP,S 8P-50 CH
C653	87-010-426-089		C-CAP,S 0.012-25 B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C654	87-010-178-089		C-CAP,S 1000P-50 B
C656	87-012-358-089		C-CAP S 0.47-10FZ
C657	87-010-196-089		C-CAP,S 0.1-25 F
C658	87-010-263-049		CAP,E 100-10
C659	87-010-263-049		CAP,E 100-10
C661	87-010-177-089		C-CAP,S 820P-50 SL
C664	87-012-141-089		C-CAP,S 0.22-16 F
C665	87-010-184-089		C-CAP,S 3300P-50 B
C666	87-010-426-089		C-CAP,S 0.012-25 B
C668	87-012-358-089		C-CAP S 0.47-10FZ
C669	87-010-404-049		CAP,E 4.7-50 SME
C670	87-010-404-049		CAP,E 4.7-50 SME
C671	87-012-156-089		C-CAP,S 220P-50 CH
C675	87-010-180-089		C-CAP,S 1500P-50 B
C714	87-010-263-049		CAP,E 100-10
FB601	87-008-372-089		FLTR,EMI BL 01RN1
FL101	86-NF5-603-019		FL,BJ454GK<V>
FL101	86-NF4-610-019		FL,BJ461GK<NAP1MK3,820EZ>
J601	82-NF7-630-019		JACK,3.5 MO
J621	82-NF7-630-019		JACK,3.5 MO
L201	87-A50-052-019		COIL,CLOCK 5.76MHZ T1
L650	87-005-487-089		COIL,150UH J FLR50
LED401	87-070-281-089		LED,SLZ736A-25-S-T
LED402	87-070-281-089		LED,SLZ736A-25-S-T
LED403	87-070-281-089		LED,SLZ736A-25-S-T
LED404	87-070-281-089		LED,SLZ736A-25-S-T
LED405	87-070-281-089		LED,SLZ736A-25-S-T
LED406	87-070-281-089		LED,SLZ736A-25-S-T
LED407	87-070-199-089		LED,SLP738F-81-S-T1
LED408	87-070-199-089		LED,SLP738F-81-S-T1
LED409	87-070-199-089		LED,SLP738F-81-S-T1
LED410	87-070-199-089		LED,SLP738F-81-S-T1
LED411	87-070-199-089		LED,SLP738F-81-S-T1
LED412	87-070-199-089		LED,SLP738F-81-S-T1
LED413	87-070-199-089		LED,SLP738F-81-S-T1
LED414	87-070-199-089		LED,SLP738F-81-S-T1
LED420	87-070-201-089		LED,SLP9118C-51-S-T1
LED421	87-070-201-089		LED,SLP9118C-51-S-T1
LED422	87-070-201-089		LED,SLP9118C-51-S-T1
LED423	87-070-201-089		LED,SLP9118C-51-S-T1
LED424	87-070-278-019		LED,SLZ-738A-24-S
LED425	87-070-278-019		LED,SLZ-738A-24-S
LED426	87-070-278-019		LED,SLZ-738A-24-S
LED427	87-070-278-019		LED,SLZ-738A-24-S
LED428	87-070-290-019		LED,SLZ 936-30-S
LED429	87-070-290-019		LED,SLZ 936-30-S
LED451	87-070-201-089		LED,SLP9118C-51-S-T1
LED452	87-070-201-089		LED,SLP9118C-51-S-T1
LED453	87-070-201-089		LED,SLP9118C-51-S-T1
LED454	87-070-201-089		LED,SLP9118C-51-S-T1
LED455	87-070-201-089		LED,SLP9118C-51-S-T1
LED456	87-070-201-089		LED,SLP9118C-51-S-T1
S301	87-036-215-089		SW,TACT EVQ21404M
S302	87-036-215-089		SW,TACT EVQ21404M
S303	87-036-215-089		SW,TACT EVQ21404M
S304	87-036-215-089		SW,TACT EVQ21404M
S305	87-036-215-089		SW,TACT EVQ21404M
S306	87-036-215-089		SW,TACT EVQ21404M<NAP1MK3,820EZ>
S307	87-036-215-089		SW,TACT EVQ21404M<NAP1MK3,820EZ>
S308	87-036-215-089		SW,TACT EVQ21404M<NAP1MK3,820EZ>
S321	87-036-215-089		SW,TACT EVQ21404M
S322	87-036-215-089		SW,TACT EVQ21404M
S323	87-036-215-089		SW,TACT EVQ21404M
S324	87-036-215-089		SW,TACT EVQ21404M
S325	87-036-215-089		SW,TACT EVQ21404M
S326	87-036-215-089		SW,TACT EVQ21404M
S327	87-036-215-089		SW,TACT EVQ21404M
S328	87-036-215-089		SW,TACT EVQ21404M
S341	87-036-215-089		SW,TACT EVQ21404M
S342	87-036-215-089		SW,TACT EVQ21404M
S343	87-036-215-089		SW,TACT EVQ21404M
S344	87-036-215-089		SW,TACT EVQ21404M
S345	87-036-215-089		SW,TACT EVQ21404M
S346	87-036-215-089		SW,TACT EVQ21404M
S347	87-036-215-089		SW,TACT EVQ21404M
S348	87-036-215-089		SW,TACT EVQ21404M
VR601	82-NK7-616-019		VR,10KB RK11K1130
VR602	82-NK7-615-019		VR,10KA RK11K1130
W104	88-913-181-119		FF-CABLE,13P 1.25
W301	83-NF8-613-019		F-CABLE 2P-2.0 KEY
W501	88-915-181-119		FF-CABLE,15P 1.25
W801	88-910-131-119		FF-CABLE,10P 1.25
MVR C.B			
C701	87-010-401-089		CAP,E 1-50 SME
C702	87-010-401-089		CAP,E 1-50 SME
C703	87-010-993-089		C-CAP,S 0.056-25 B
C704	87-010-993-089		C-CAP,S 0.056-25 B
C705	87-012-393-089		C-CAP,S 0.022-16 RK
C706	87-012-393-089		C-CAP,S 0.022-16 RK
C707	87-010-182-089		C-CAP,S 2200P-50 B
C708	87-010-182-089		C-CAP,S 2200P-50 B
C709	87-012-393-089		C-CAP,S 0.22-16,R,K
C710	87-012-393-089		C-CAP,S 0.22-16,R,K
C711	87-016-081-089		C-CAP,S 0.1-16 RK
C712	87-010-405-089		CAP,E 10-50 SME
C713	87-010-260-089		CAP,E 47-25 SME
C715	87-010-401-089		CAP,E 1-50 SME
C751	87-010-198-089		C-CAP,S 0.022-25 B
MVR751	86-NF5-617-019		VR,RTRY 50KBX2 W/S
KEY C.B			
S349	87-036-215-089		SW,TACT EVQ21404M
S350	87-036-215-089		SW,TACT EVQ21404M
S351	87-036-215-089		SW,TACT EVQ21404M
S352	87-036-215-089		SW,TACT EVQ21404M
S353	87-036-215-089		SW,TACT EVQ21404M
AC C.B			
C103	87-010-187-089		C-CAP,S 0.01-25 B
⚠PR101	87-026-682-089		PROTECTOR,10A 60V 491
⚠PR102	87-026-682-089		PROTECTOR,10A 60V 491
PT C.B			
⚠	82-304-743-019		TERMINAL,1P
⚠CF109	87-033-213-088		CLAMP FUSE SMK
⚠CF110	87-033-213-089		CLAMP FUSE SMK
⚠F109	87-035-364-019		FUSE,T 1.6A 250V T E
⚠PT001	86-NF5-608-019		PT,E 6NF-5
DECK C.B			
SFR1	87-024-581-089		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-310		SOL ASSY,27
SOL2	82-ZM1-626-310		SOL ASSY,27K
SW1	87-036-378-019		SW,PUSH 1-1-1 SH
SW2	87-036-378-019		SW,PUSH 1-1-1 SH
SW3	87-036-378-019		SW,PUSH 1-1-1 SH
SW4	87-036-378-019		SW,PUSH 1-1-1 SH
SW5	87-036-378-019		SW,PUSH 1-1-1 SH
SW6	87-036-378-019		SW,PUSH 1-1-1 SH
SW8	87-036-378-019		SW,PUSH 1-1-1 SH
HEAD-1 C.B			
HEAD-2 C.B			

TRANSISTOR ILLUSTRATION

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2SC3266GR
KTA1266GR
KTC3198GR

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2SD655E
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DTA114ES
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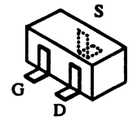

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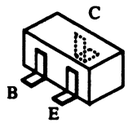

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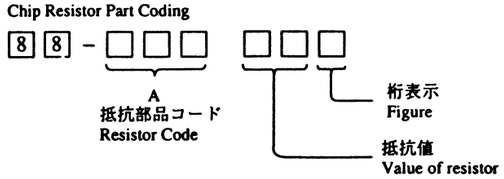
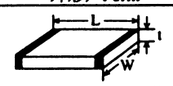
DTA143EK
DTA124EK
DTC144WK
2SD2114 K,U,V

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

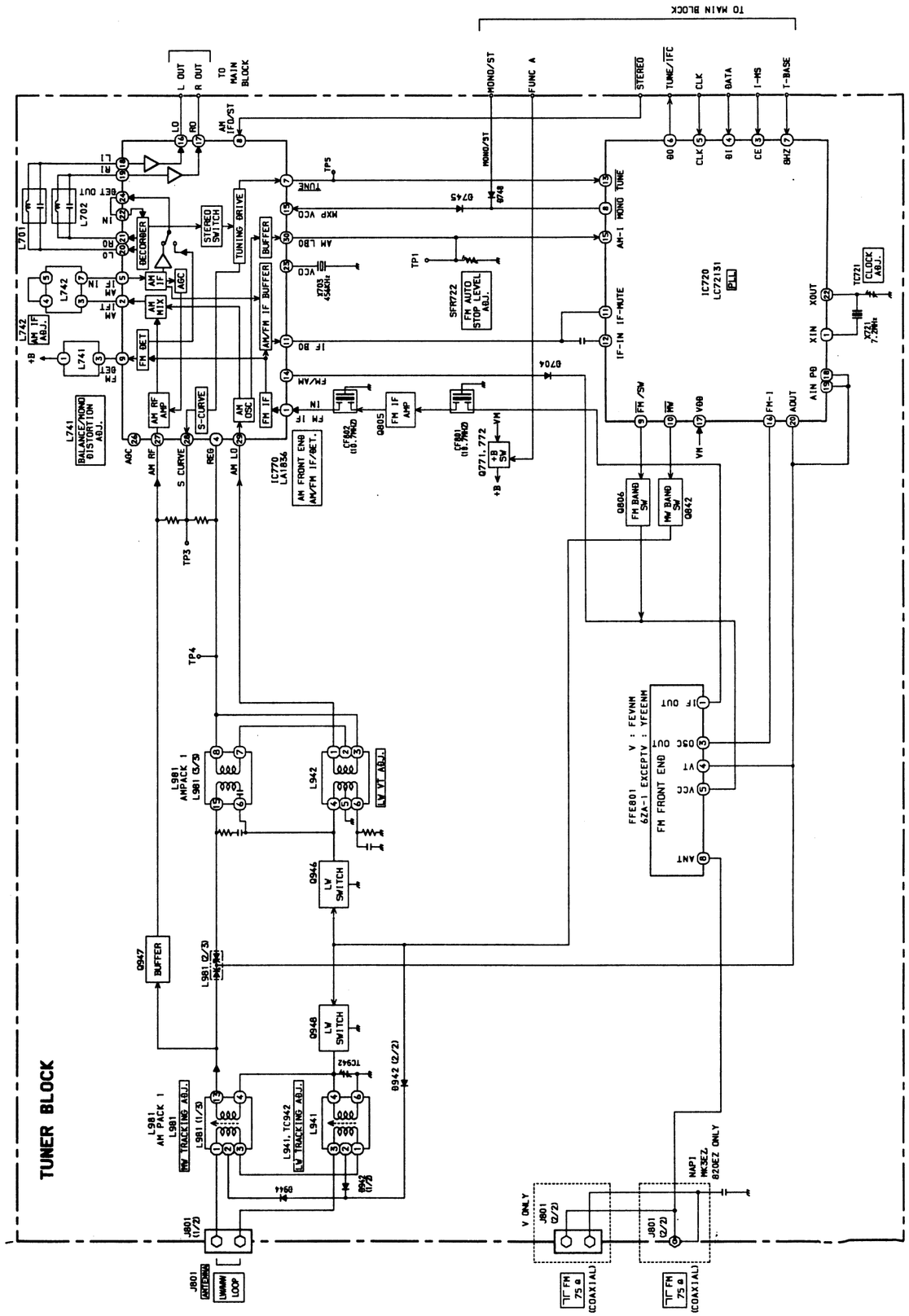
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



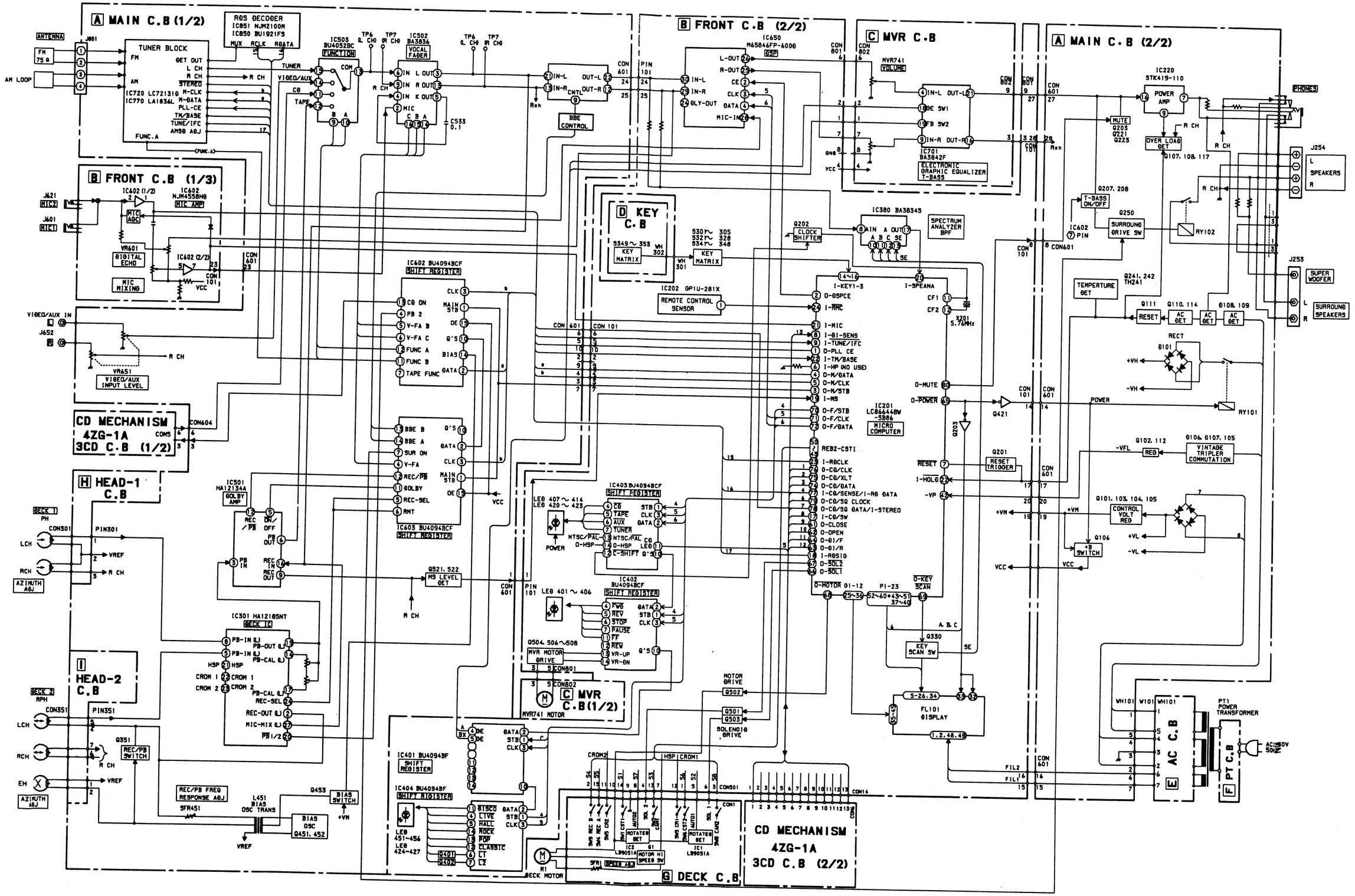
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code: A
1／16W	1608	±5%	CJ		1.6	0.8	0.45	108
1／10W	2125	±5%	CJ		2	1.25	0.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.55	128

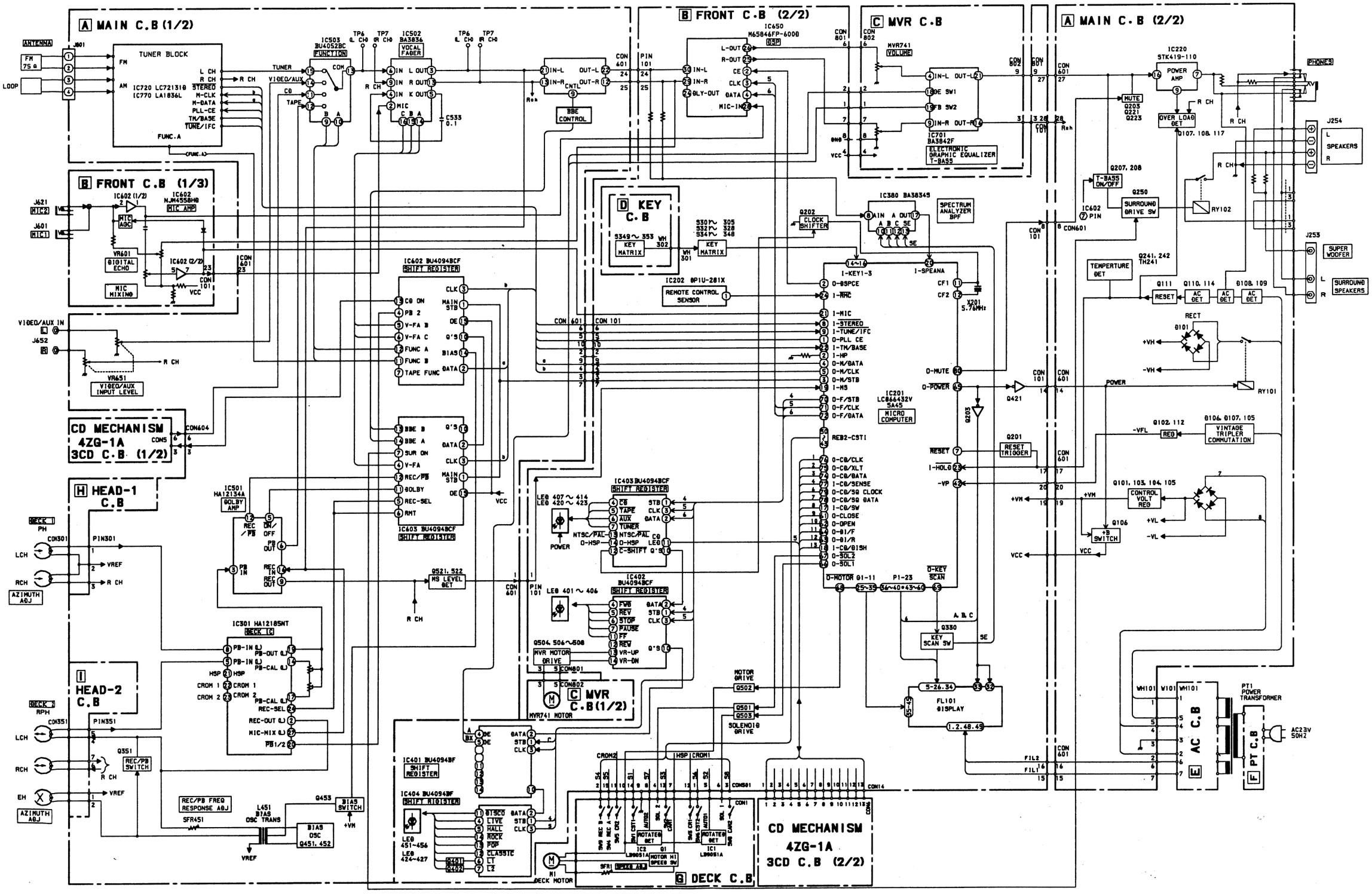
BLOCK DIAGRAM – 1 (TUNER)



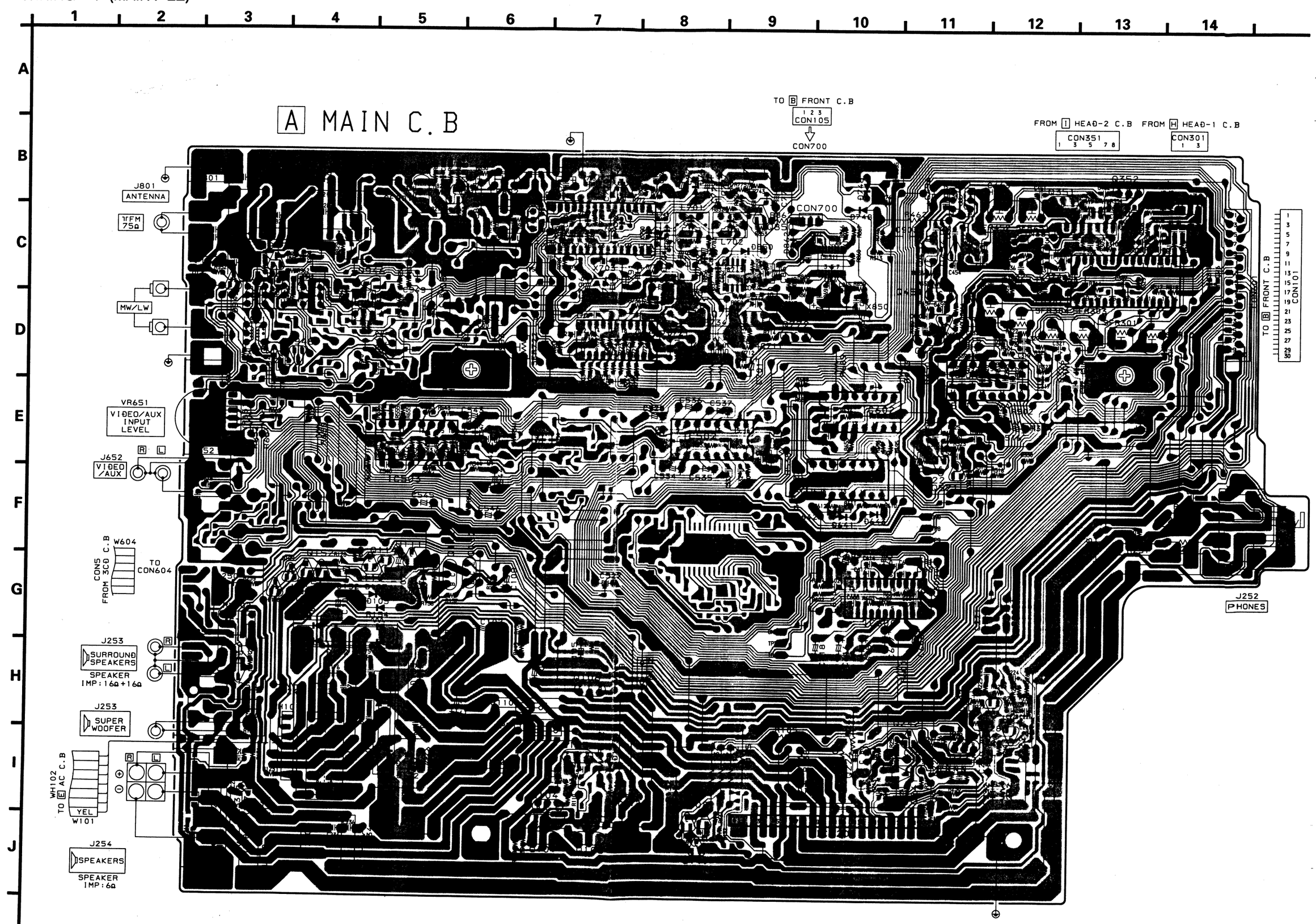
BLOCK DIAGRAM – 2 (MAIN / FRONT : EZ)



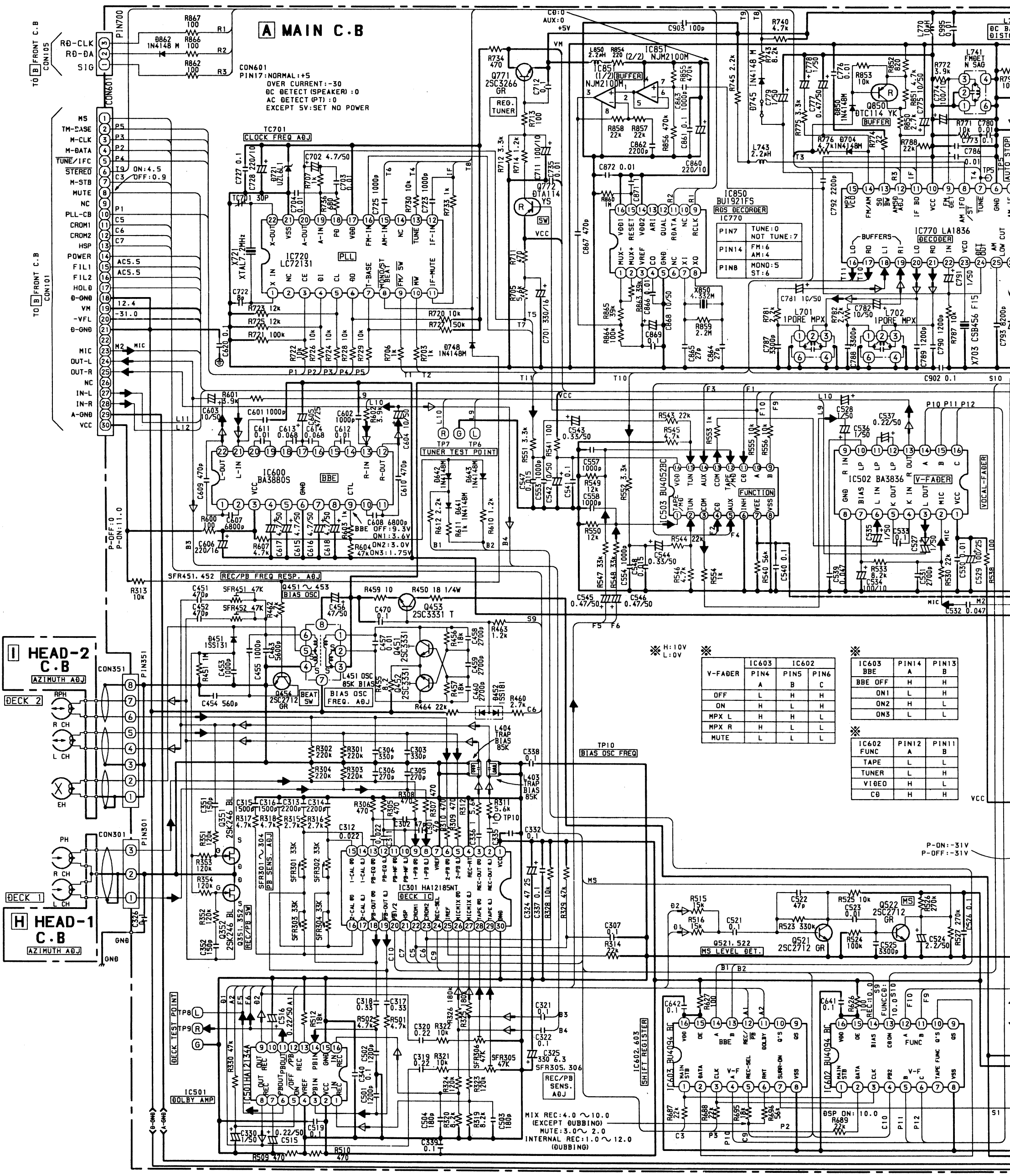
BLOCK DIAGRAM – 3 (MAIN / FRONT : V)



A MAIN C.B


TO B FRONT C.B
CON105
CON700
FROM I HEAD-2 C.B
CON351
FROM H HEAD-1 C.B
CON301
J801
ANTENNA
FM 75Ω
MW/LW
VR651
VIDEO/AUX INPUT LEVEL
J652
VIDEO /AUX
W604
CONS FROM 3CD C.B
TO CON604
J253
SURROUND SPEAKERS
SPEAKER IMP:16Ω+16Ω
J253
SUPER WOOFER
WH102
TO E AC C.B
YEL
W101
J254
SPEAKERS
SPEAKER IMP:6Ω
TO B FRONT C.B
CON101
J252
PHONES

SCHEMATIC DIAGRAM – 1 (MAIN : EZ)



※ H:10V L:0V

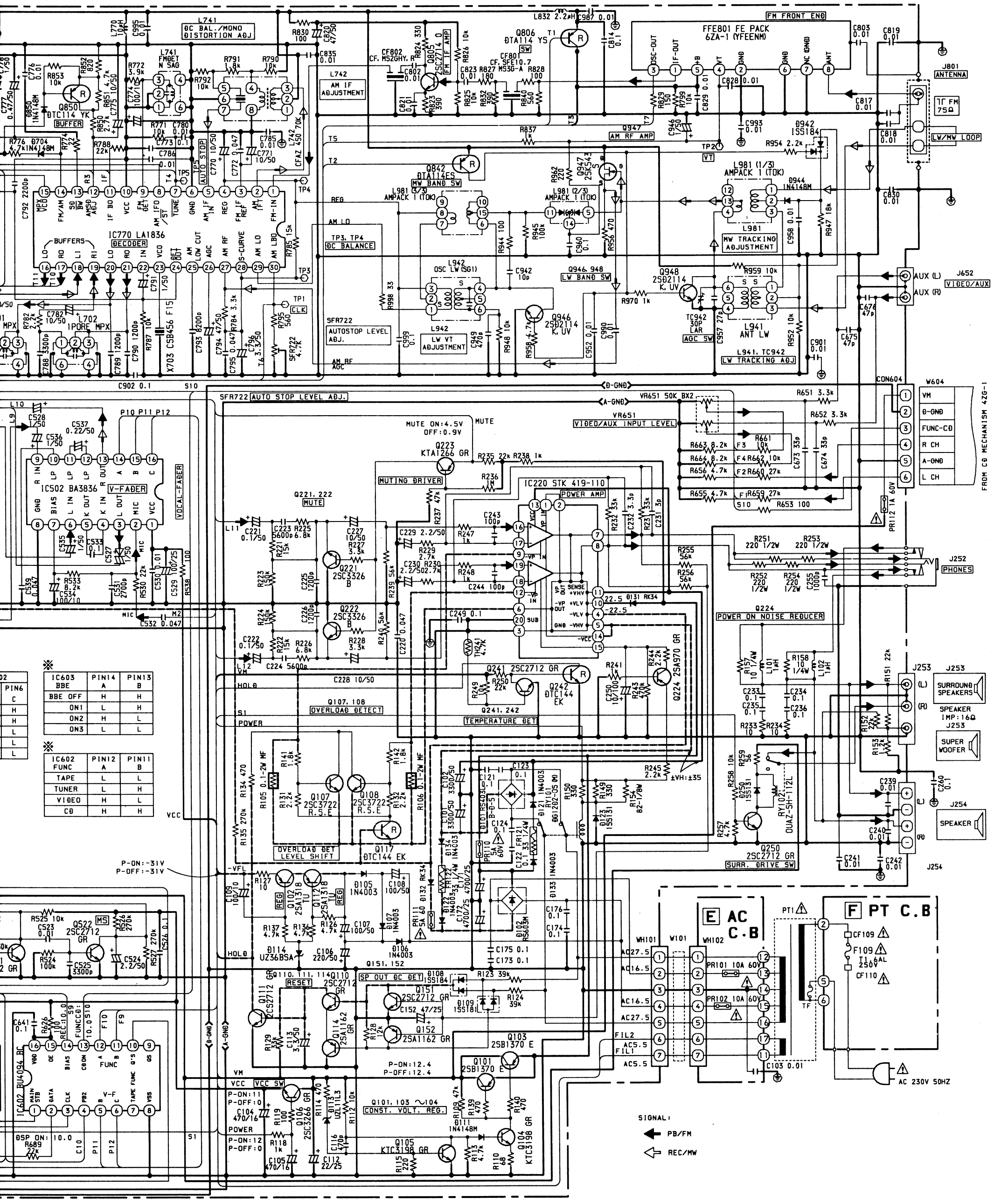
V-FAØER	IC603 PIN4 A	IC602 PIN5 B	IC602 PIN6 C
OFF	L	H	H
ØN	H	L	H
MPX L	H	H	L
MPX R	H	L	L
MUTE	L	L	L

※

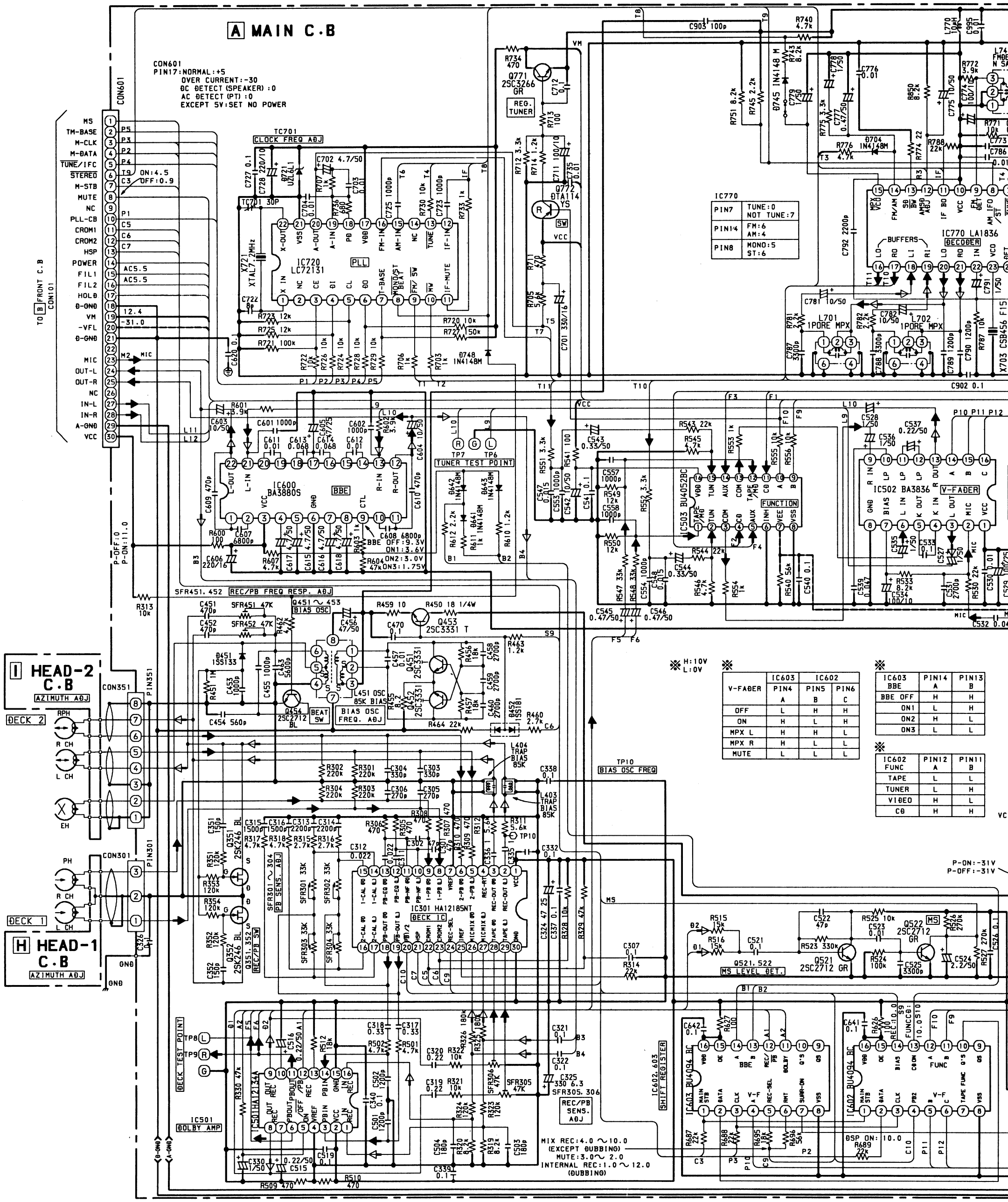
IC603 BBE	PIN14 A	PIN13 B
BBE OFF	H	H
ØN1	L	H
ØN2	H	L
ØN3	L	L

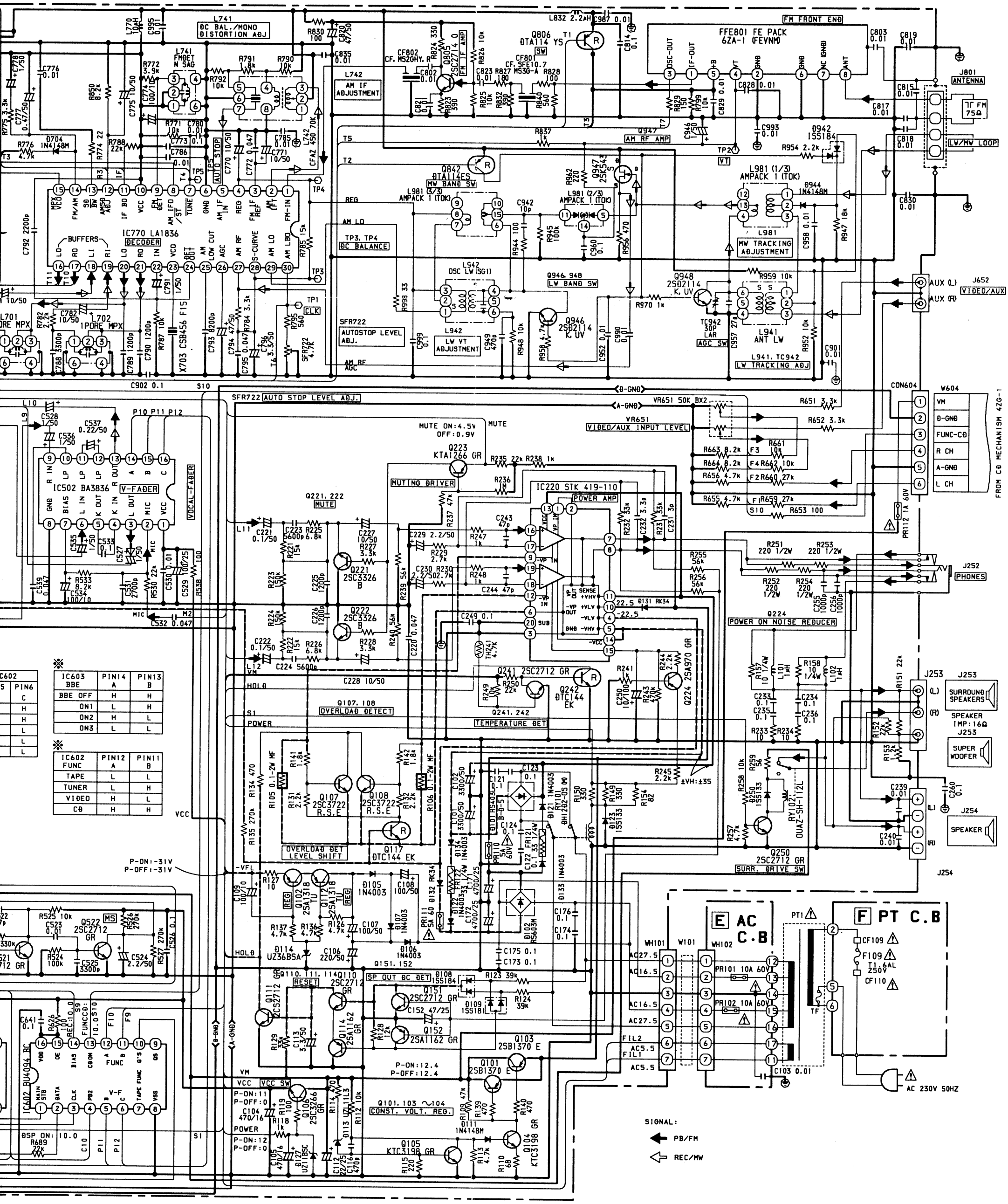
※

IC602 FUNC	PIN12 A	PIN11 B
TAPE	L	L
TUNER	L	H
VIØEØ	H	L
CØ	H	H


FM FRONT END
FFE801 FE PACK
6ZA-1 (YFEENM)
L741
ØC BAL./MONO
ØISTORTION ADJ
L742
AM IF
ADJUSTMENT
Q806
ØTA114 YS
SW
CF802
CF. MS2GHY.
CF801
CF. SFE10.7
MS3G-A
Q805
2SC2714 O
FM IF AMP
Q947
AM RF AMP
Q842
ØTA114ES
MW BAND SW
L981 (1/3)
AMPACK 1 (TOK)
L981 (2/3)
AMPACK 1 (TOK)
L981 (3/3)
AMPACK 1 (TOK)
L981
MW TRACKING
ADJUSTMENT
Q948
2SØ2114
K, UV
L941
ANT LW
L941, TC942
LW TRACKING ADJ
TC942
30P
LAR
AGC SW
L942
OSC LW (SG1)
L942
LW VT
ADJUSTMENT
Q946, 948
LW BAND SW
Q946
2SØ2114
K, UV
J801
ANTENNA
1T FM
75Ω
LW/MW LOOP
J652
VIDEO/AUX
AUX (L)
AUX (R)
IC770 LA1836
ØECODER
BUFFERS
IC502 BA3836
V-FADER
VOCAL-FADER
Q850
ØTC114 YK
BUFFER
IC702
IPORE MPX
X703 CSB456 F15
SFR722
AUTOSTOP LEVEL
ADJ.
AM RF
AGC
TP1 CLK
TP2 VT
TP3, TP4
ØC BALANCE
TP5
AUTO STOP
TP4
AM LO
REG
T5
T2
C902 0.1
S10
ØSP ON: 10.0
R689 22k
SFR722 AUTO STOP LEVEL ADJ.
ØSP ON: 10.0
MUTE ON:4.5V
OFF:0.9V
MUTE
Q223
KTA1266 GR
MUTING ØRIVER
Q221, 222
MUTE
IC220 STK 419-110
POWER AMP
VR651 50K BX2
VR651
VIDEO/AUX INPUT LEVEL
W604
CON604
VM
Ø-GNØ
FUNC-CØ
R CH
A-GNØ
L CH
FROM CØ MECHANISM 4ZG-1
PR112 1A 60V
J252
PHONES
Q224
POWER ON NOISE REDUCER
J253
SURROUNØ SPEAKERS
SPEAKER
IMP:16Ω
SUPER WOOFER
J254
SPEAKER
Q250
2SC2712 GR
SURR. ØRIVE SW
HOLØ
POWER
S1
Q107, 108
OVERLOAØ ØETECT
TEMPERATURE ØET
OVERLOAØ ØET
LEVEL SHIFT
Q117
ØTC144 EK
Q241, 242
Q241 2SC2712 GR
Q242
ØTC144 EK
Q224 2SA970 GR
±VH:±35
P-ON:-31V
P-OFF:-31V
-VEE
VCC
VCC SW
P-ON:11
P-OFF:0
P-ON:12
P-OFF:0
P-ON:12.4
P-OFF:12.4
Q101, 103 ~104
CONST. VOLT. REG.
Q101
2SB1370 E
Q103
2SB1370 E
Q102
2SA1318
TU
Q112
2SA1318
TU
Q110, 111, 114
Q110
2SC2712 GR
Q111
2SC2712 GR
Q114
2SA1162 GR
Q151
2SC2712 GR
Q152
2SA1162 GR
Q104
KTC3198 GR
Q105
KTC3198 GR
Q106
2SC3266 GR
Q107
2SC3722
R.S.E
Q108
2SC3722
R.S.E
Q522
2SC2712
GR
IC602 BU4094 BC
V-F
FUNC
SP OUT ØC ØET
RESET
REG
SIGNAL:
PB/FM
REC/MW
E AC C.B
F PT C.B
WH101
WH102
W101
PR101 10A 60V
PR102 10A 60V
PT1
CF109
F109
T1.6AL 250V
CF110
TF
AC 230V 50HZ
AC27.5
AC16.5
AC5.5
FIL1
FIL2
C103 0.01
IC603 BBE
IC602 FUNC
TAPE
TUNER
VIDEO
CØ

SCHEMATIC DIAGRAM – 2 (MAIN : V)

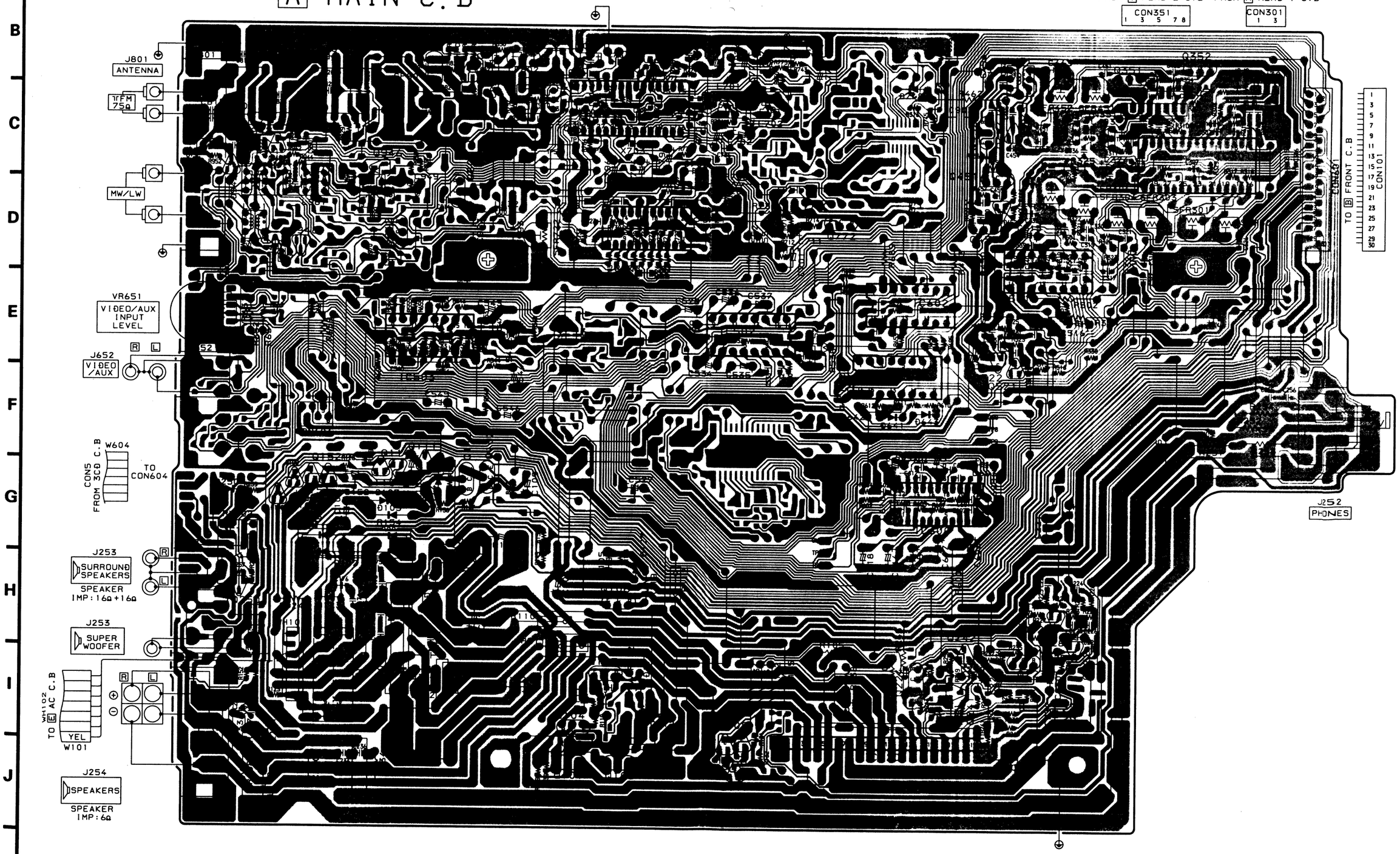




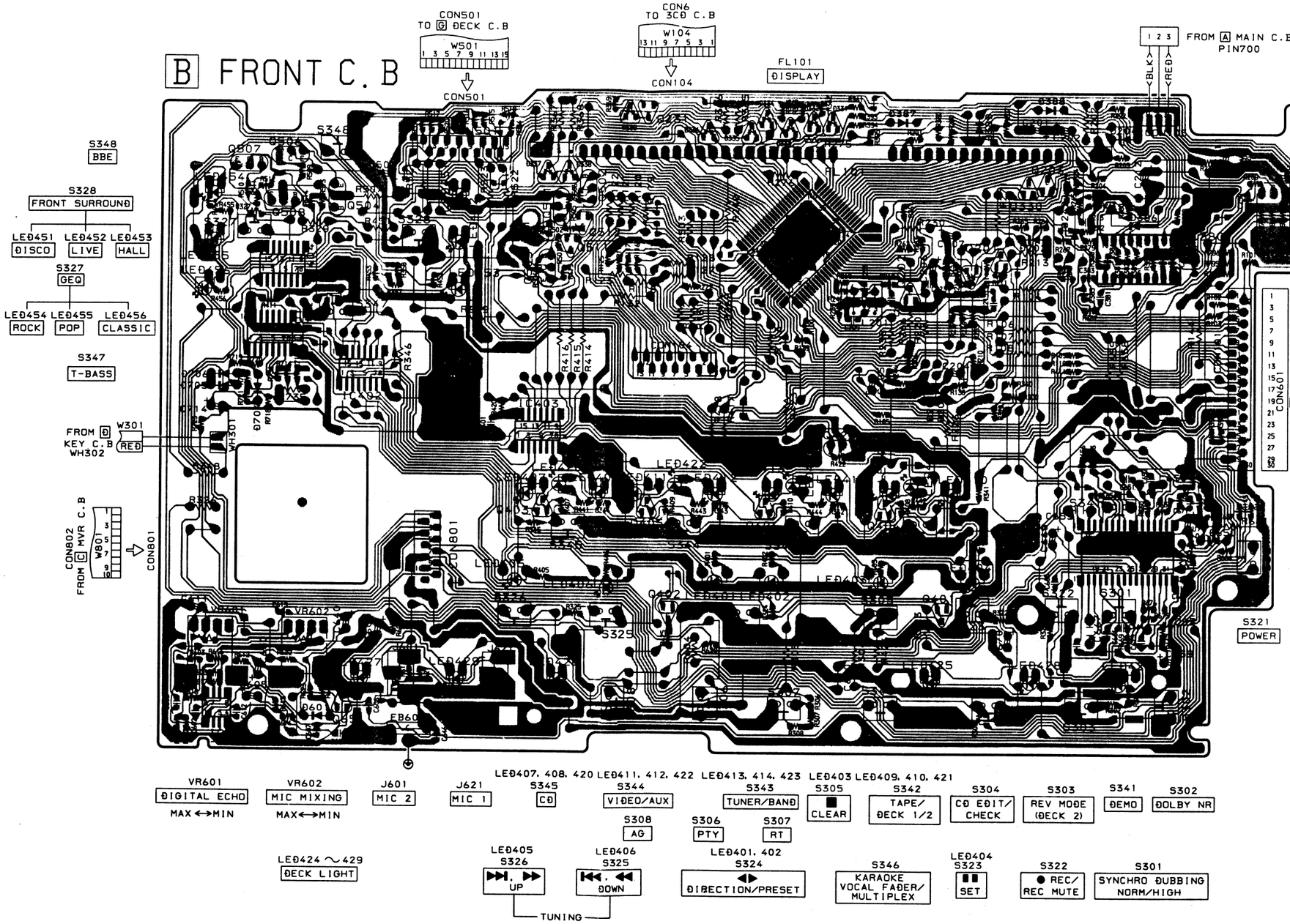
IC603 BBE	PIN14 A	PIN13 B
BBE OFF	H	H
ØN1	L	H
ØN2	H	L
ØN3	L	L

IC602 FUNC	PIN12 A	PIN11 B
TAPE	L	L
TUNER	L	H
VIØEØ	H	L
CØ	H	H

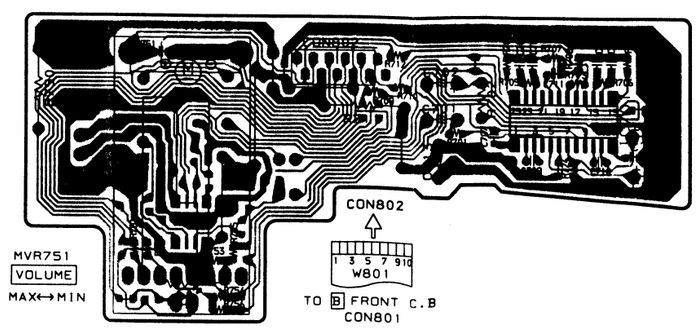
A MAIN C.B


FROM I HEAD-2 C.B
CON351
1 3 5 7 8
FROM H HEAD-1 C.B
CON301
1 3
J801
ANTENNA
FM 75Ω
MW/LW
VR651
VIDEO/AUX INPUT LEVEL
J652
VIDEO /AUX
R L
CONS FROM 3CD C.B
W604
TO CON604
J253
SURROUND SPEAKERS
SPEAKER IMP : 16Ω+16Ω
J253
SUPER WOOFER
TO E AC C.B
WH102
YEL
W101
J254
SPEAKERS
SPEAKER IMP : 6Ω
TO B FRONT C.B
CON101
CON201
J252
PHONES

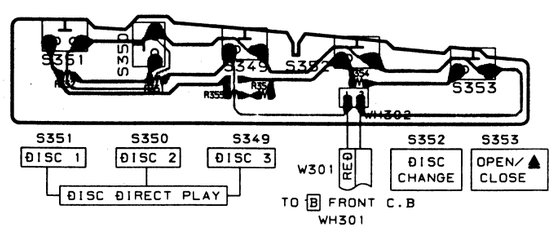
B FRONT C.B



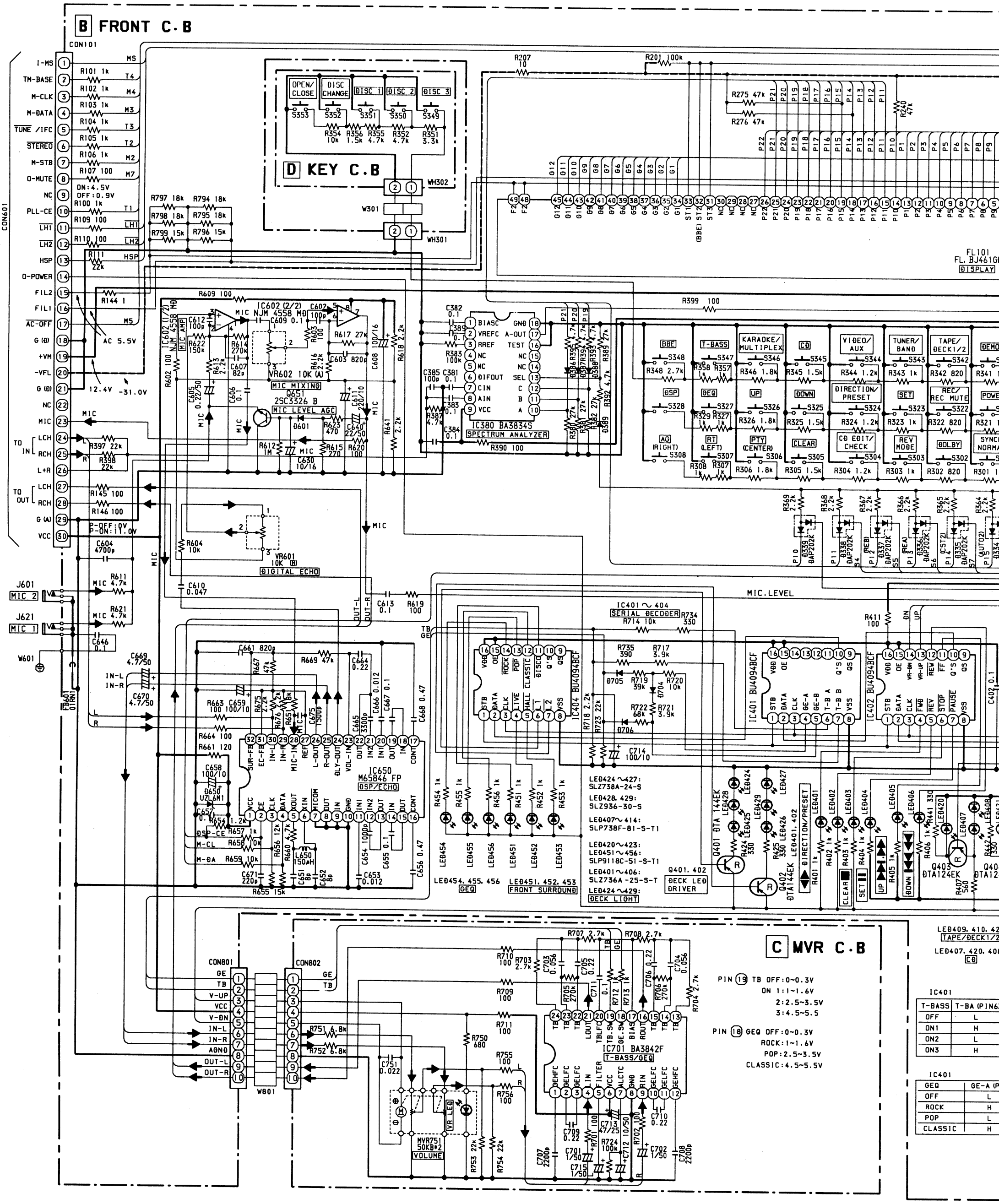
C MVR C.B

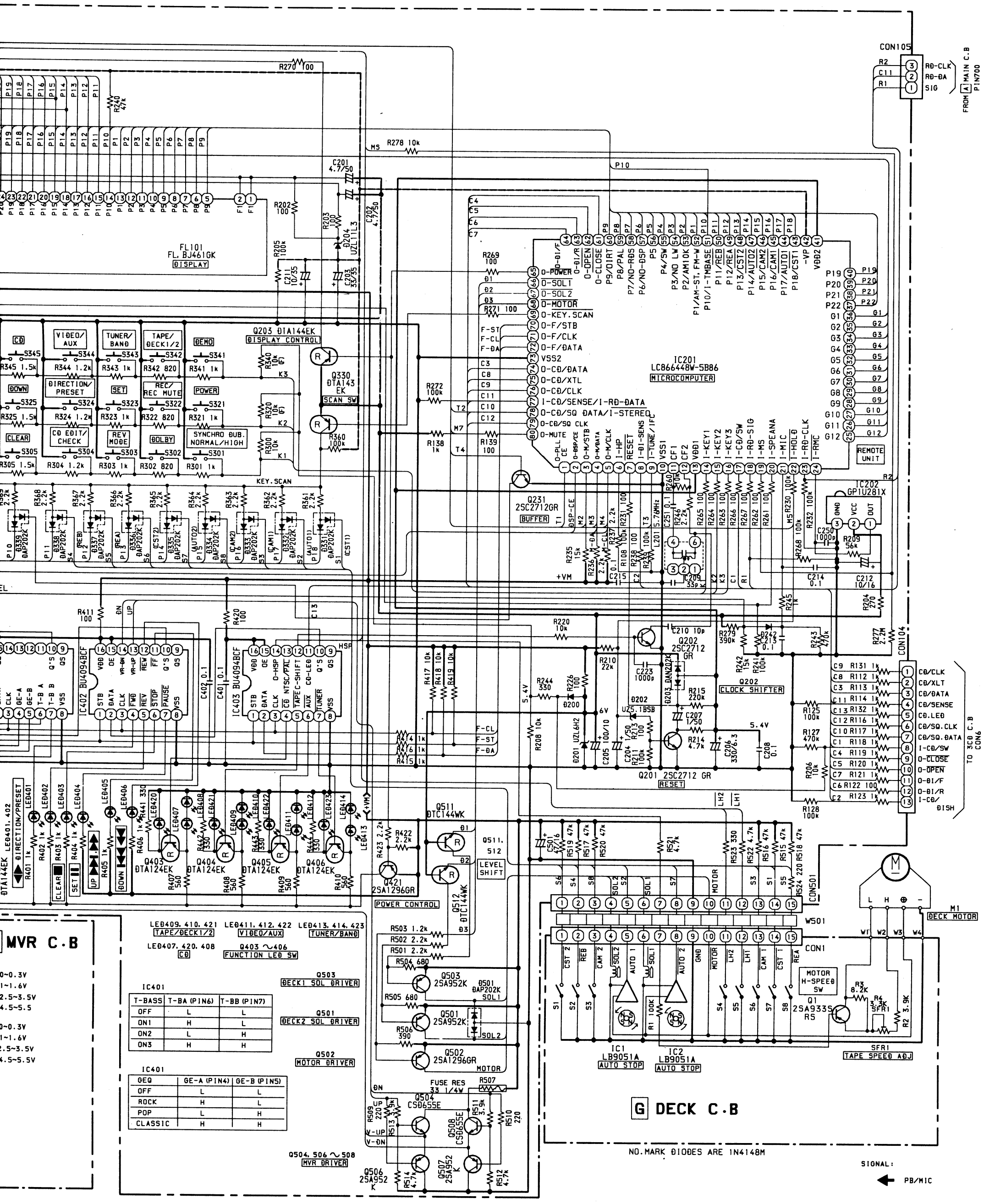


D KEY C.B

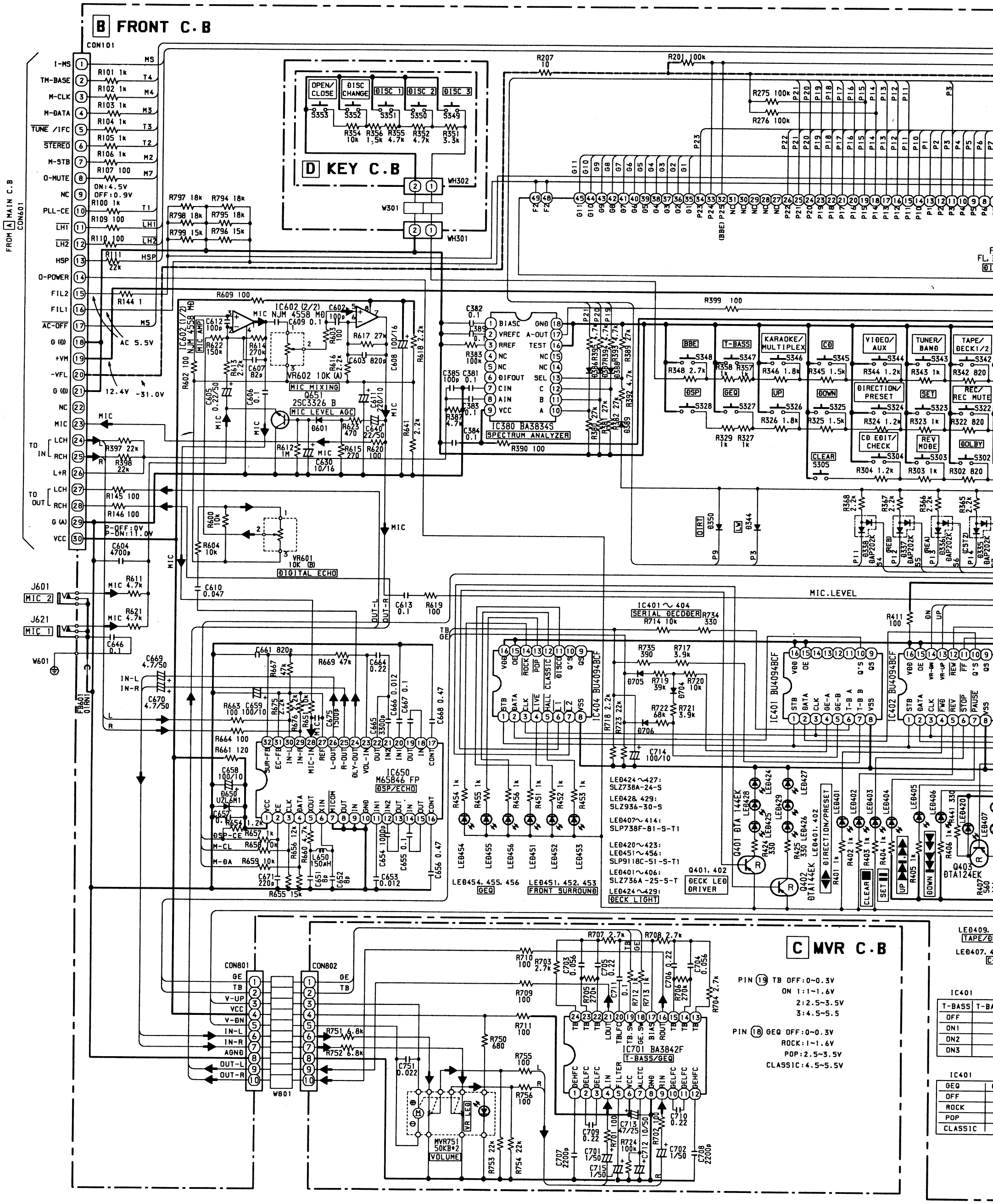


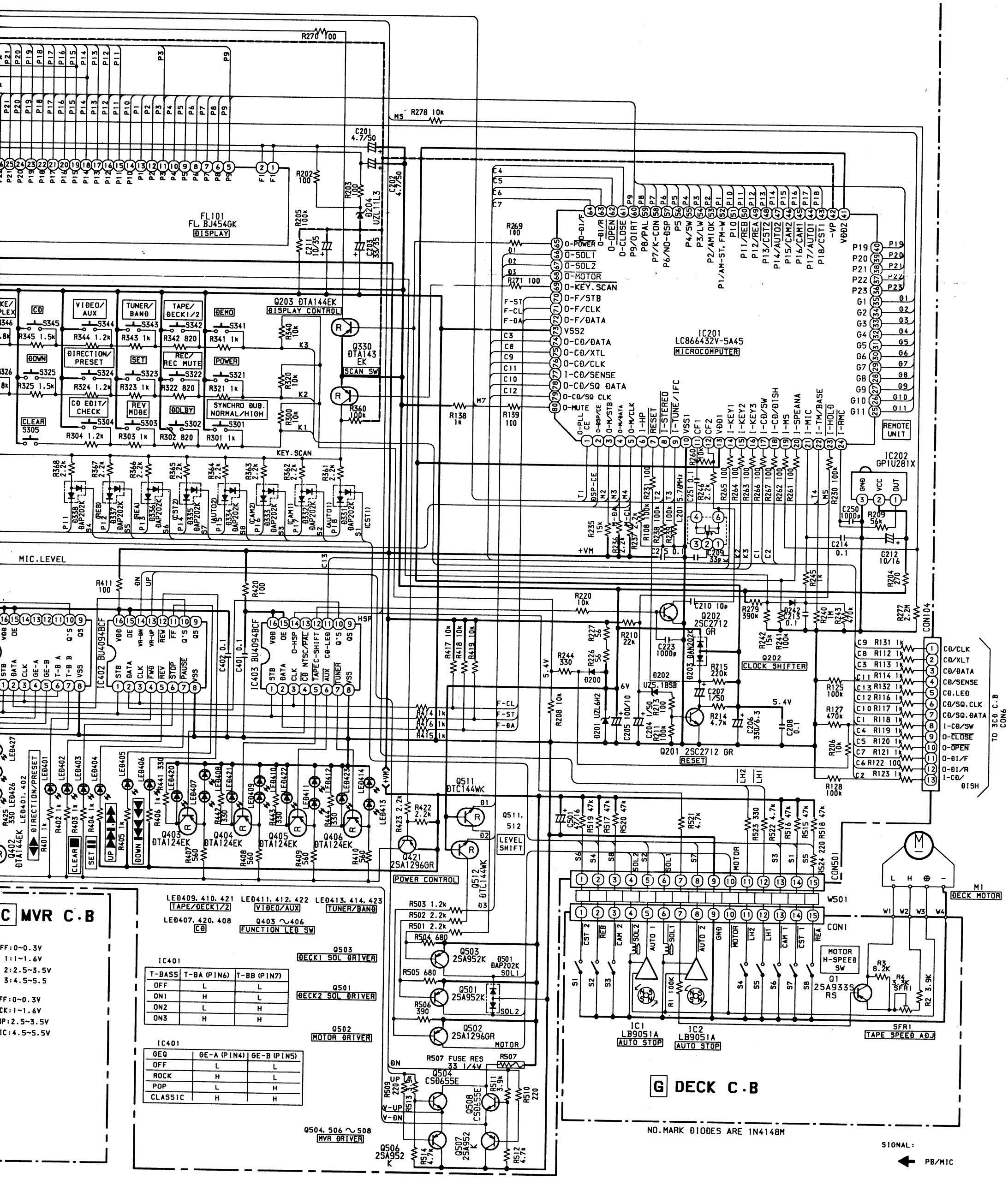
SCHEMATIC DIAGRAM – 3 (FRONT : EZ)



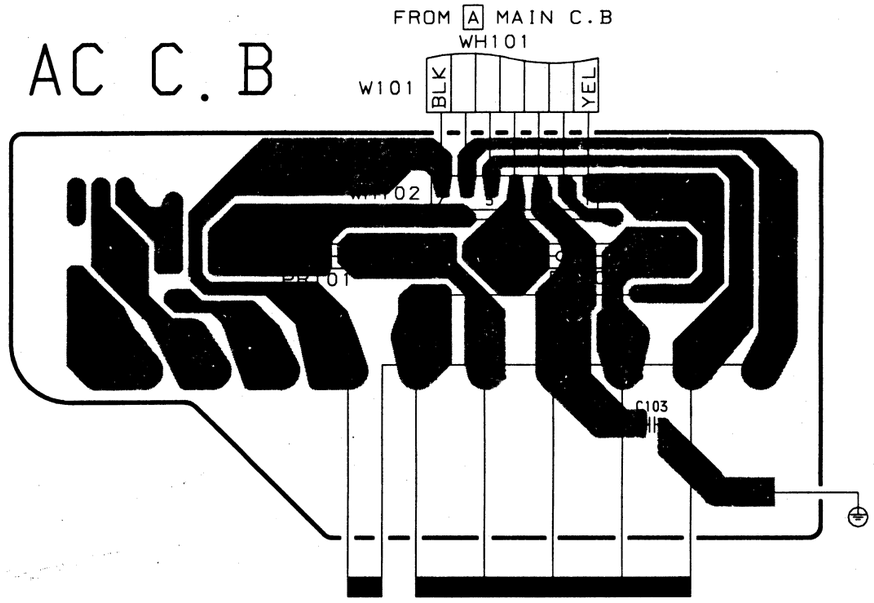

CON105
R2
C11
R1
RØ-CLK
RØ-ØA
SIG
FROM A MAIN C.B
P1N700
R270 100
R240 47k
R278 10k
C201 4.7/50
C202 4.7/50
R202 100
R203 100
ØZ04 UZL11L3
R205 100k
C211 10/35
C203 33/35
FL101
FL. BJ461GK
ØISPLAY
P10
R269 100
ØI
Ø2
Ø3
R271 100
F-ST
F-CL
F-ØA
C3
C8
C9
C11
C10
C12
T2
M7
T4
R272 100k
R138 1k
R139 100
O-POWER
O-SOL1
O-SOL2
O-MOTOR
O-KEY.SCAN
O-F/STB
O-F/CLK
O-F/ØATA
VSS2
O-CØ/ØATA
O-CØ/XTL
O-CØ/CLK
I-CØ/SENSE/I-RØ-ØATA
O-CØ/SQ ØATA/I-STEREO
O-CØ/SQ CLK
O-MUTE
IC201
LC866448W-5B86
MICROCOMPUTER
O-PLL CE
O-BSP/CE
O-M/STB
O-M/ØATA
O-M/CLK
I-HP
RESET
I-ØI-SENS
I-TUNE/IFC
VSS1
CF1
CF2
VØØ1
I-KEY1
I-KEY2
I-KEY3
I-CØ/SW
I-RØ-SIG
I-MS
I-SPEANA
I-MIC
T-HOLØ
I-RØ-CLK
I-RMC
REMOTE UNIT
Q231
2SC2712GR
BUFFER
R260 100k
R246 2.2k
C251 0.1
5.7ØMHz
L201
C205 33p K
C215
R235 15k
R236 2.2k
R108 100k
R237 2.2k
R231 100
R238 100
R239 100k
R265 100
R264 100
R263 100
R266 100
R267 100
R262 100
R261 100
R230 100k
R232 100k
R268 100k
IC202
GP1U281X
GNØ
VCC
OUT
C250 1000p
R209 56k
C214 0.1
C212 10/16
R204 270
R277 2.2M
CON104
R245 1k
R243 470k
R242 15k
C213 0.-
R241 100k
R279 390k
ØZ42
C210 10p
Q202
2SC2712
GR
Q202
CLOCK SHIFTER
R220 10k
R210 22k
C223 1000p
ØZ03 ØAN202K
R215 220k
C207 1/50
R214 4.7k
C206 330/6.3
C208 0.1
5.4V
ØZ02
UZ5.1BSB
R244 330
R226 100
ØZ00
ØZ01 UZL6H2
C205 100/10
R208 10k
C204 1/50
R211 100k
R213 100
Q201 2SC2712 GR
RESET
R125 100k
R127 470k
R206 10k
R128 100k
C9 R131 1k
C8 R112 1k
C3 R113 1k
C11 R114 1k
C13 R132 1k
C12 R116 1k
C10 R117 1k
C1 R118 1k
C4 R119 1k
C5 R120 1k
C7 R121 1k
C6 R122 100
C2 R123 1k
CØ/CLK
CØ/XLT
CØ/ØATA
CØ/SENSE
CØ.LED
CØ/SQ.CLK
CØ/SQ.ØATA
I-CØ/SW
O-CLOSE
O-OPEN
O-ØI/F
O-ØI/R
I-CØ/ØISH
TO 3CØ C.B CON6
P19
P20
P21
P22
G1
G2
G3
G4
G5
G6
G7
G8
G9
G10
G11
G12
CØ
VIDEØ/AUX
TUNER/BANØ
TAPE/ØECK1/2
ØEMØ
ØIRECTION/PRESET
SET
REC/REC MUTE
POWER
CØ EØIT/CHECK
REV MODE
ØØLBY
SYNCHRØ ØUB. NORMAL/HIGH
CLEAR
DØWN
S345 1.5k
S344 1.2k
S343 1k
S342 820
S341 1k
S325 1.5k
S324 1.2k
S323 1k
S322 820
S321 1k
S305 1.5k
S304 1.2k
S303 1k
S302 820
S301 1k
R340 10k (F)
R320 10k (F)
R300 10k
K3
K2
K1
Q203 ØTA144EK
ØISPLAY CONTROL
Q330
ØTA143EK
SCAN SW
R360 100k
KEY.SCAN
R368 2.2k
R367 2.2k
R366 2.2k
R365 2.2k
R364 2.2k
R363 2.2k
R362 2.2k
R361 2.2k
ØAP202K
S4
S5
S6
S7
S8
S3
S2
S1
R411 100
ØN
UP
R420 100
C13
HSR
IC402 BU4094BCF
IC403 BU4094BCF
VØØ
STB
ØATA
CLK
OE
VR-ØN
VR-UP
REW
FF
FWØ
REV
STOP
PAUSE
Q'S
QS
VSS
O-HSP
CØ NTSC/PAL
TAPE C-SHIFT
AUX
TUNER
CØ-LEØ
C402 0.1
C401 0.1
R417 10k
R418 10k
R419 10k
F-CL
F-ST
F-ØA
R414 1k
R416 1k
R415 1k
LEØ401
LEØ402
LEØ403
LEØ404
LEØ405
LEØ406
R441 330
LEØ420
LEØ407
LEØ408
LEØ421
LEØ409
LEØ410
LEØ422
LEØ411
LEØ412
LEØ423
LEØ414
LEØ413
+VM
ØTA144EK
ØIRECTION/PRESET
R401 1k
R402 1k
R403 1k
R404 1k
R405 1k
R406 1k
CLEAR
SET
UP
DØWN
Q403 ØTA124EK
Q404 ØTA124EK
Q405 ØTA124EK
Q406 ØTA124EK
R407 560
R408 560
R409 560
R410 560
R443 330
R444 330
R445 330
R446 330
Q511
ØTC144WK
Q511, 512
LEVEL SHIFT
Q512
ØTC144WK
R422 2.2k
R423 2.2k
Q421
2SA1296GR
POWER CONTROL
R503 1.2k
R502 2.2k
R501 2.2k
R504 680
Q503
2SA952K
Ø501
ØAP202K
SØL1
R505 680
Q501
2SA952K
SØL2
R506 390
Q502
2SA1296GR
MØTØR
FUSE RES
33 1/4W
R507
ØN
Q504
CS0655E
R509 220
UP
R513 3.3k
V-UP
V-ØN
Q508
CS0655E
R511 3.9k
R510 220
Q506
2SA952K
R514 4.7k
Q507
2SA952K
R512 4.7k
C501 47/16
R519 47k
R517 47k
R520 47k
R521 4.7k
R523 330
R522 4.7k
R516 47k
R515 47k
R524 220
R518 47k
CON501
W501
CON1
S6
S4
S8
SØL2
S2
SØL1
S7
MØTØR
S1
S3
S5
CST 2
REB
CAM 2
AUTØ 1
AUTØ 2
GNØ
LH2
LH1
CAM 1
CST 1
REA
MØTØR H-SPEEØ SW
Q1
2SA933S
RS
R1 100K
R3 8.2K
R4 3.3K
SFR1
R2 3.9K
SFR1
TAPE SPEEØ AØJ
IC1
LB9051A
AUTØ STØP
IC2
LB9051A
AUTØ STØP
M1
ØECK MØTØR
W1
W2
W3
W4
L
H
⊕
−
LEØ409, 410, 421
TAPE/ØECK1/2
LEØ411, 412, 422
VIDEØ/AUX
LEØ413, 414, 423
TUNER/BANØ
LEØ407, 420, 408
CØ
Q403 ~406
FUNCTIØN LEØ SW
IC401
T-BASS | T-BA (PIN6) | T-BB (PIN7)
OFF | L | L
ON1 | H | L
ON2 | L | H
ON3 | H | H
Q503
ØECK1 SØL ØRIVER
Q501
ØECK2 SØL ØRIVER
Q502
MØTØR ØRIVER
IC401
GEQ | GE-A (PIN4) | GE-B (PIN5)
OFF | L | L
ROCK | H | L
POP | L | H
CLASSIC | H | H
Q504, 506 ~508
MVR ØRIVER
MVR C.B
0~0.3V
1~1.6V
2.5~3.5V
4.5~5.5
0~0.3V
1~1.6V
2.5~3.5V
4.5~5.5V
G DECK C.B
NØ.MARK ØIØØES ARE 1N4148M
SIGNAL:
PB/MIC

SCHEMATIC DIAGRAM – 4 (FRONT : V)

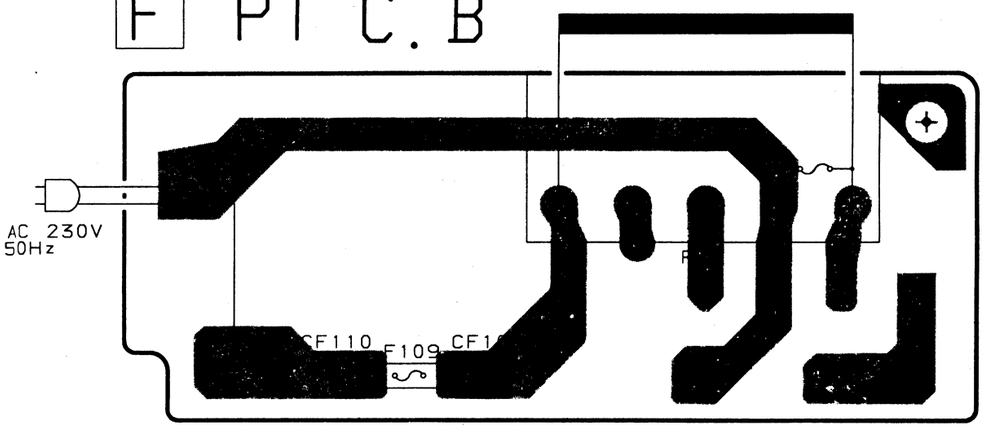



FL101
FL, BJ454GK
DISPLAY
Q203 DTA144EK
DISPLAY CONTROL
Q330
DTA143
EK
SCAN SW
IC201
LC866432V-5A45
MICROCOMPUTER
IC202
GP1U281X
REMOTE
UNIT
CONTROL
KEY.SCAN
MIC.LEVEL
IC402 BU4094BCF
IC403 BU4094BCF
Q202
CLOCK SHIFTER
Q201 2SC2712 GR
RESET
Q511
DTC144WK
Q512
DTC144WK
LEVEL
SHIFT
Q421
2SA1296GR
POWER CONTROL
Q503
2SA952K
DECK1 SOL DRIVER
Q501
2SA952K
DECK2 SOL DRIVER
Q502
2SA1296GR
MOTOR DRIVER
Q504
CS0655E
Q508
CS0655E
Q506
2SA952
Q507
2SA952
K
MVR DRIVER
CON104
CON501
W501
CON1
M1
DECK MOTOR
IC1
LB9051A
AUTO STOP
IC2
LB9051A
AUTO STOP
Q1
2SA933S
RS
SFR1
TAPE SPEED ADJ
MOTOR
H-SPEED
SW
TO 3C9 C.B
CON6
LED409. 410. 421
TAPE/DECK1/2
LED411. 412. 422
VIDEO/AUX
LED413. 414. 423
TUNER/BAND
LED407. 420. 408
CD
Q403 ~406
FUNCTION LED SW
IC401
T-BASS | T-BA (PIN6) | T-BB (PIN7)
OFF | L | L
ON1 | H | L
ON2 | L | H
ON3 | H | H
IC401
GEQ | GE-A (PIN4) | GE-B (PIN5)
OFF | L | L
ROCK | H | L
POP | L | H
CLASSIC | H | H
Q504. 506 ~508
MVR DRIVER
NO.MARK DIODES ARE 1N4148M
SIGNAL:
PB/MIC
C MVR C.B
DECK MOTOR
G DECK C.B
CD
VIDEO/
AUX
TUNER/
BAND
TAPE/
DECK1/2
DEMO
DIRECTION/
PRESET
SET
REC/
REC MUTE
POWER
CD EDIT/
CHECK
REV
MODE
DOLBY
SYNCHRO DUB.
NORMAL/HIGH
CLEAR
DOWN
UP
SET
DIRECTION/PRESET
CLEAR
SET
UP
DOWN

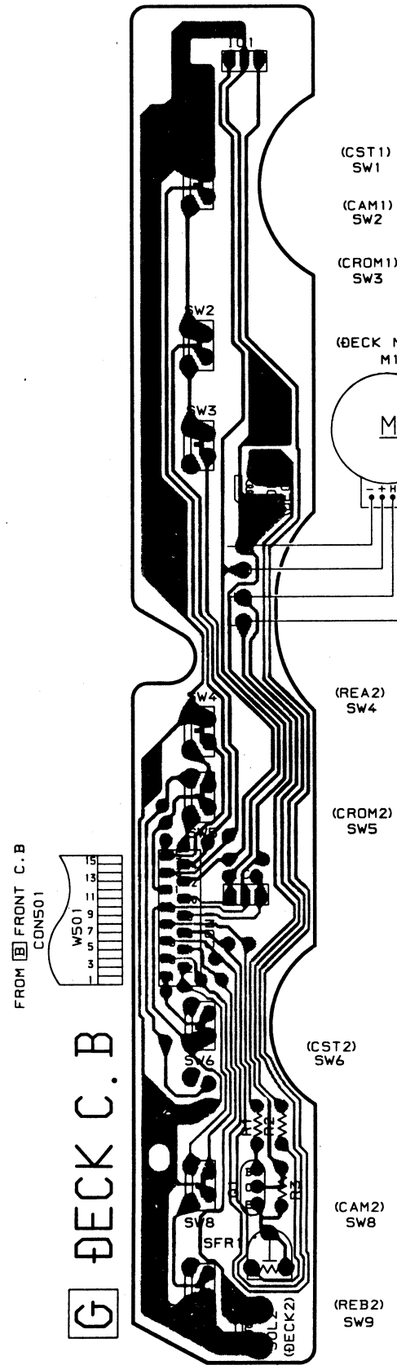
E AC C.B



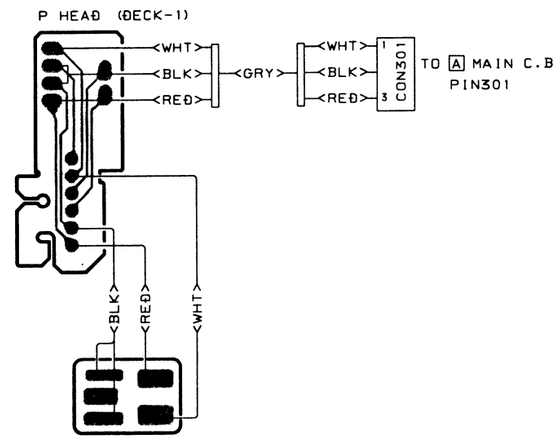
F PT C.B



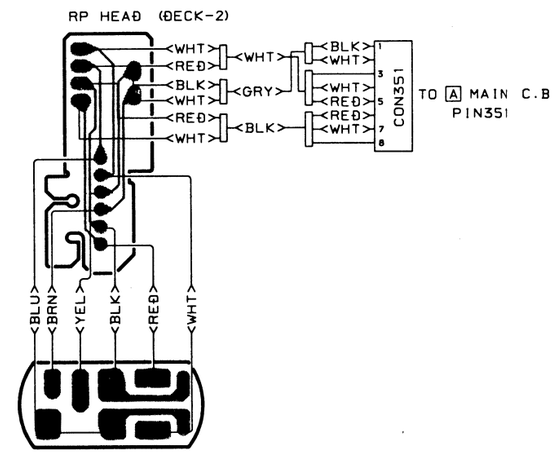
G DECK C.B



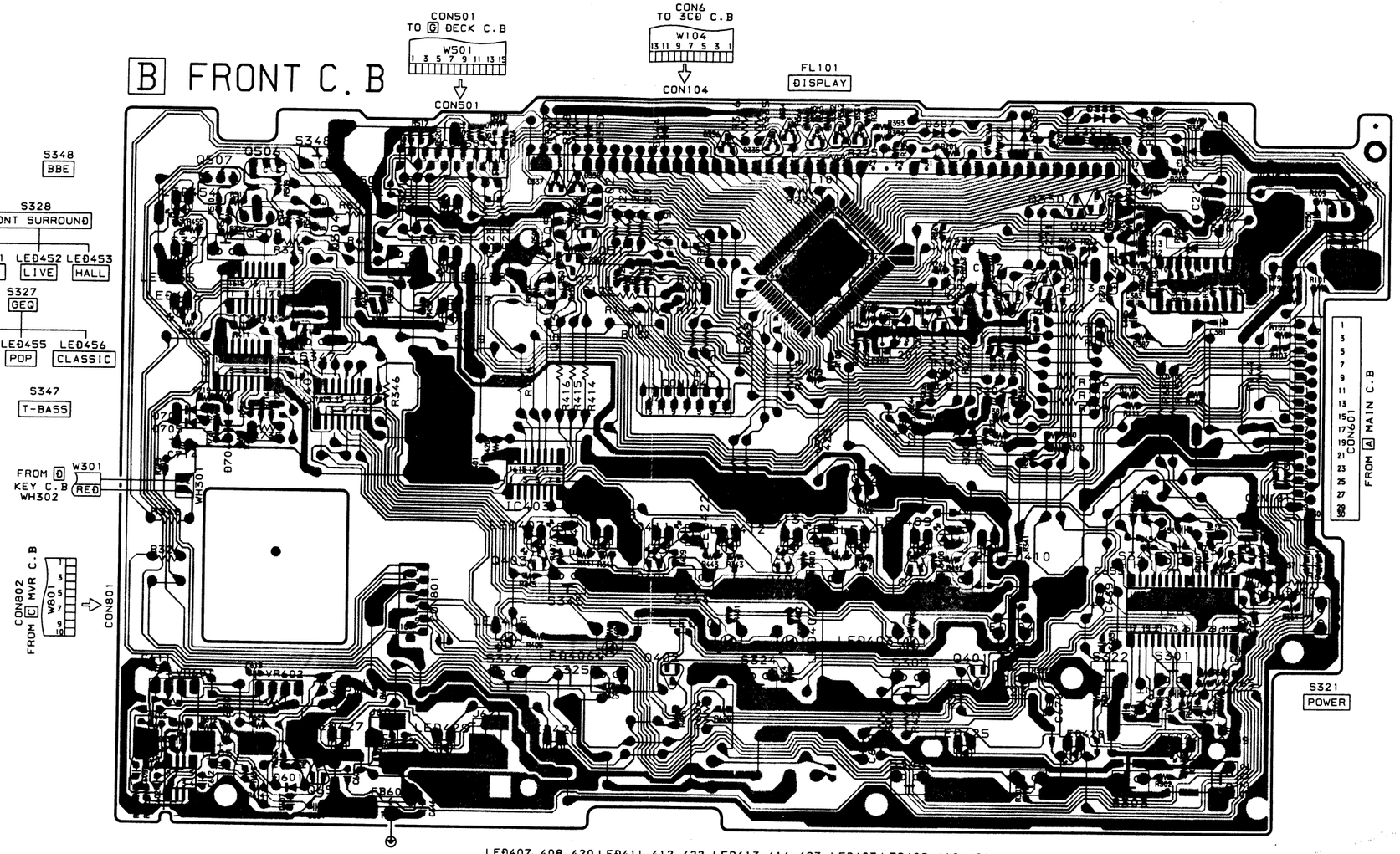
H HEAD-1 C.B



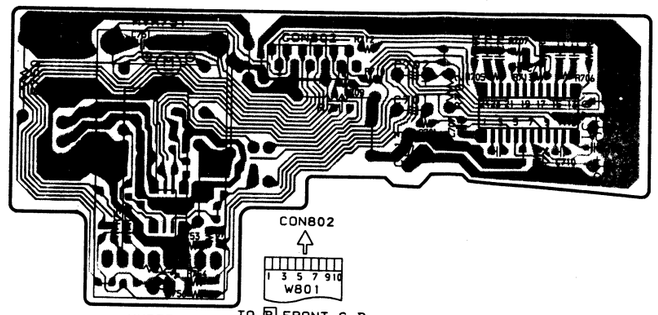
I HEAD-2 C.B



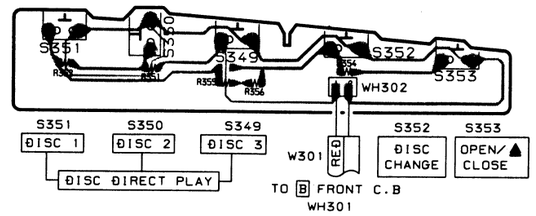
B FRONT C.B



C MVR C.B

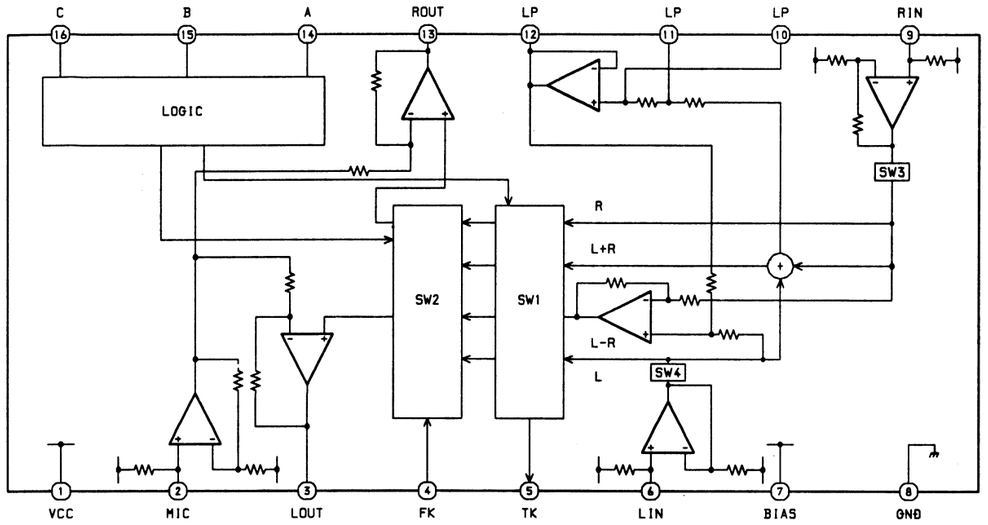


D KEY C.B

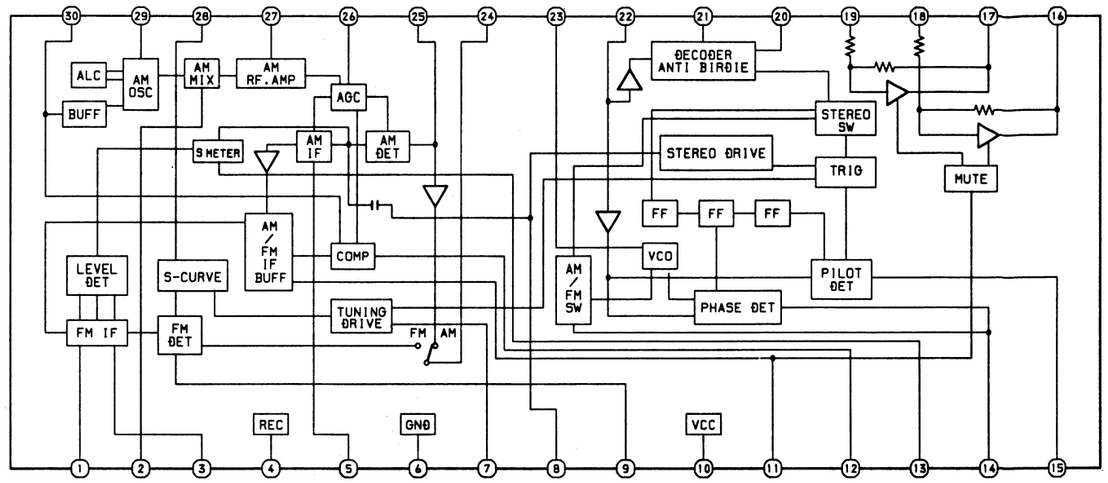


IC BLOCK DIAGRAM – 1

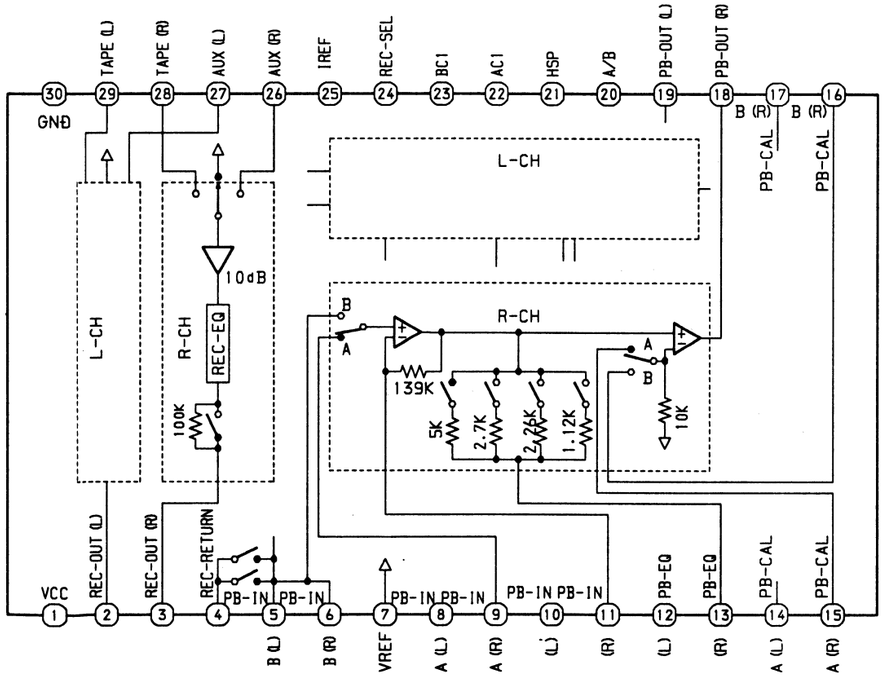
IC, BA3836



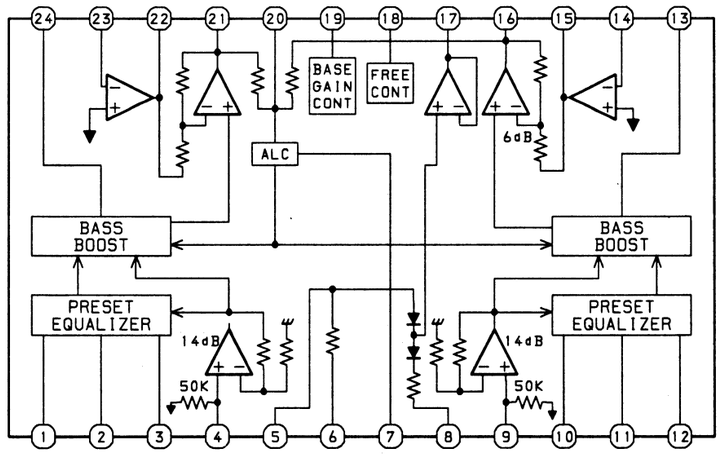
IC, LA1836L



IC, HA12185NT

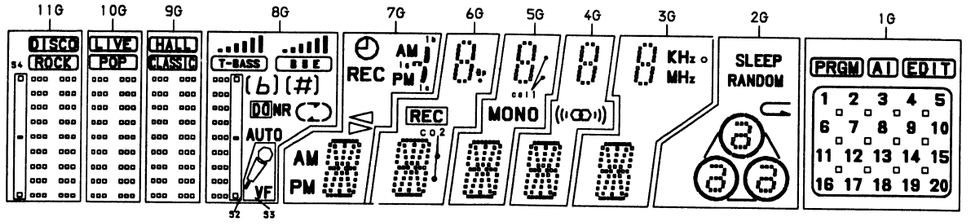


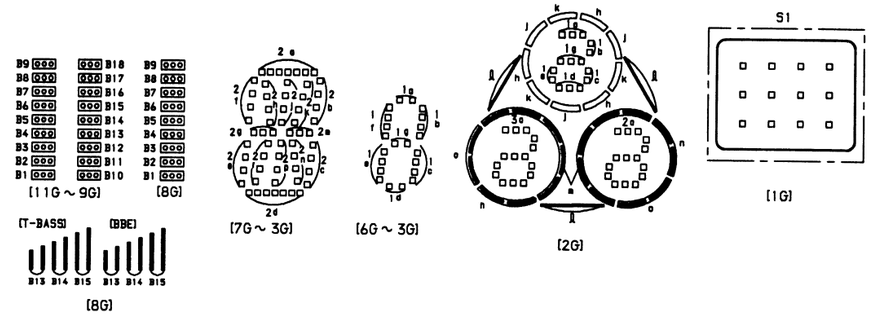
IC, BA3842F



FL GRID ASSIGNMENT / ANODE CONNECTION

FL, BJ454GK
GRID ASSIGNMENT

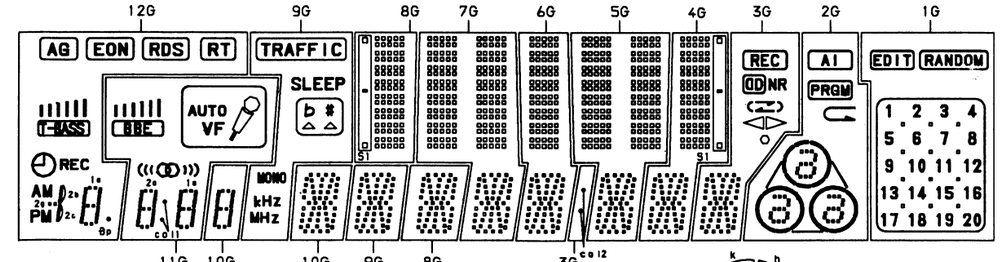


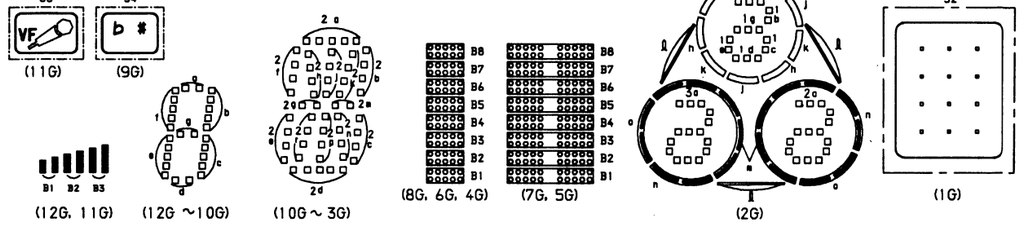


ANODE CONNECTION

	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B10	B10	B10	S3	d	d	d	d	d	n	**20**
P2	B1	B1	B1	B1	j, p	j, p	j, p	j, p	j, p	o	**19**
P3	B11	B11	B11	**AUTO**	n	n	n	n	n	3e	**18**
P4	B2	B2	B2	B2	r	r	r	r	r	3c	**17**
P5	B12	B12	B12	DD NR	c	c	c	c	c	3a,3d,3g	**16**
P6	B3	B3	B3	B3	e	e	e	e	e	3b	**15**
P7	B13	B13	B13	☾	m	m	m	m	m	2e	**14**
P8	B4	B4	B4	B4	g	g	g	g	g	2c	**13**
P9	B5	B5	B5	B5	f	f	f	f	f	2a,2d,2g	**11**
P10	B15	B15	B15	b ♯	b	b	b	b	b	⫿	**10**
P11	B6	B6	B6	B6	k	k	k	k	k	j	**9**
P12	B16	B16	B16	☽	h	h	h	h	h	h	**8**
P13	B7	B7	B7	B7	a	a	a	a	a	k	**7**
P14	B14	B14	B14	([#])	**PM (lower)**	c o l 2	col1(upper)	—	**KHz**	2b	**12**
P15	B17	B17	B17	([b])	**AM (lower)**	REC	**MONO**	(((◎)))	o	1e	**6**
P16	B8	B8	B8	B8	▷	Đp	col1(upper)	—	**MHz**	1a,1d,1g	**5**
P17	B18	B18	B18	B12	◁	1d	1d	1d	1d	1c	**4**
P18	B9	B9	B9	B9	**REC**	1e	1e	1e	1e	1b	**3**
P19	[ROCK]	[POP]	[CLASSIC]	B13	**PM (upper)**	1c	1c	1c	1c	—	**2**
P20	[DISCO]	[LIVE]	[HALL]	B14	1g	1g	1g	1g	1g	m	**1**
P21	—	—	—	B11	1b, 1c	1f	1f	1f	1f	⊂	EDIT
P22	**DISCO**	**LIVE**	**HALL**	B10	◴	1b	1b	1b	1b	**SLEEP**	AI
P23	**ROCK**	**POP**	**CLASSIC**	B15	**AM (upper)**	1a	1a	1a	1a	**RANDOM**	PRGM
P24	S4	—	—	S2 ◪	—	—	—	—	—	—	S1
P25	—	—	—	**BBE**	—	—	—	—	—	—	—

FL, BJ461GK
GRID ASSIGNMENT

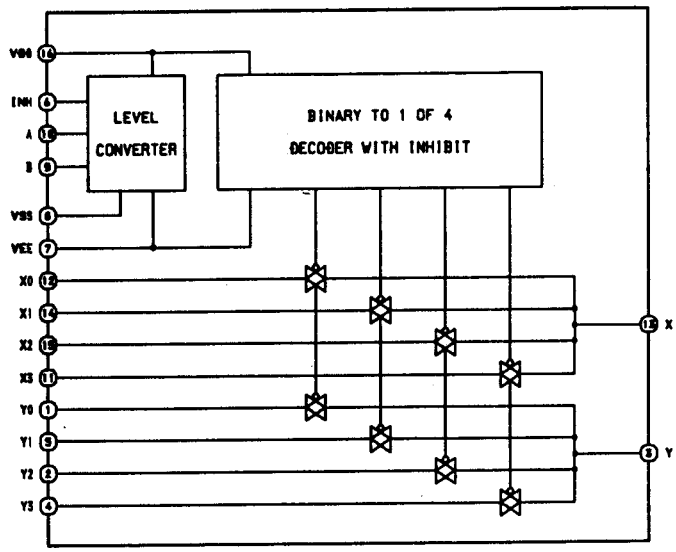




ANODE CONNECTION

	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	B1	B1	2d	2d	2d	2d	2d	2d	2d	2d	n	**20**
P2	B2	B2	2n	2n	2n	2n	2n	2n	2n	2n	o	**19**
P3	B3	B3	2p	2p	2p	2p	2p	2p	2p	2p	3e	**18**
P4	RT	**AUTO**	2r	2r	2r	2r	2r	2r	2r	2r	3c	**17**
P5	RDS	S3	2e	2e	2e	2e	2e	2e	2e	2e	3a,3d,3g	**16**
P6	EON	col1 (DOWN)	2c	2c	2c	2c	2c	2c	2c	2c	3b	**15**
P7	AG	2d	2g	2g	2g	2g	2g	2g	2g	2g	2e	**14**
P8	◴	2e	2m	2m	2m	2m	2m	2m	2m	2m	2c	**13**
P9	**REC**	2c	2f	2f	2f	2f	2f	2f	2f	2f	2a,2d,2g	**12**
P10	**AM**	2g	2b	2b	2b	2b	2b	2b	2b	2b	l	**11**
P11	2g	2f	2k	2k	2k	2k	2k	2k	2k	2k	j	**10**
P12	2b, 2c	2b	2j	2j	2j	2j	2j	2j	2j	2j	h	**9**
P13	**PM**	2a	2h	2h	2h	2h	2h	2h	2h	2h	k	**8**
P14	Đp	col1 (UP)	2a	2a	2a	2a	2a	2a	2a	2a	2b	**7**
P15	1d	1d	1d	**MHz**	B1	B1	B1	B1	B1	○	1e	**6**
P16	1e	1e	1e	**KHz**	B2	B2	B2	B2	B2	◁	1a,1d,1g	**5**
P17	1c	1c	1c	**MONO**	B3	B3	B3	B3	B3	▷	1c	**4**
P18	1g	1g	1g	△ (b)	B4	B4	B4	B4	B4	⊂	1b	**3**
P19	1f	1f	1f	△ (#)	B5	B5	B5	B5	B5	☽	m	**2**
P20	1b	1b	1b	**SLEEP**	B6	B6	B6	B6	B6	DD NR	AI	**1**
P21	1a	1a	1a	TRAFFIC	B7	B7	B7	B7	B7	REC	⊂	EDIT
P22	—	(((◎)))	—	—	B8	B8	B8	B8	B8	col2	PRGM	RANDOM
P23	T-BASS	—	—	—	S1	—	—	—	S1	⇄	—	S2
P24	—	BBE	—	—	—	—	—	—	—	—	—	—
P25	—	—	—	S4	—	—	—	—	—	—	—	—

IC, BU4052BC

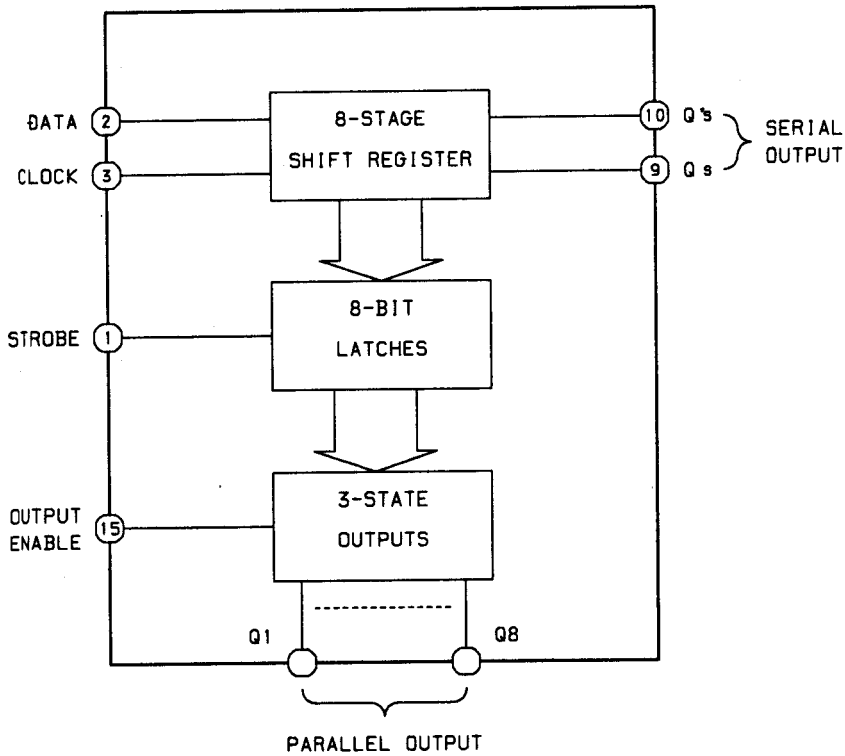


TRUTH TABLE

INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	x	x	NONE

X : DON'T CARE.

IC, BU4094BC/BCF



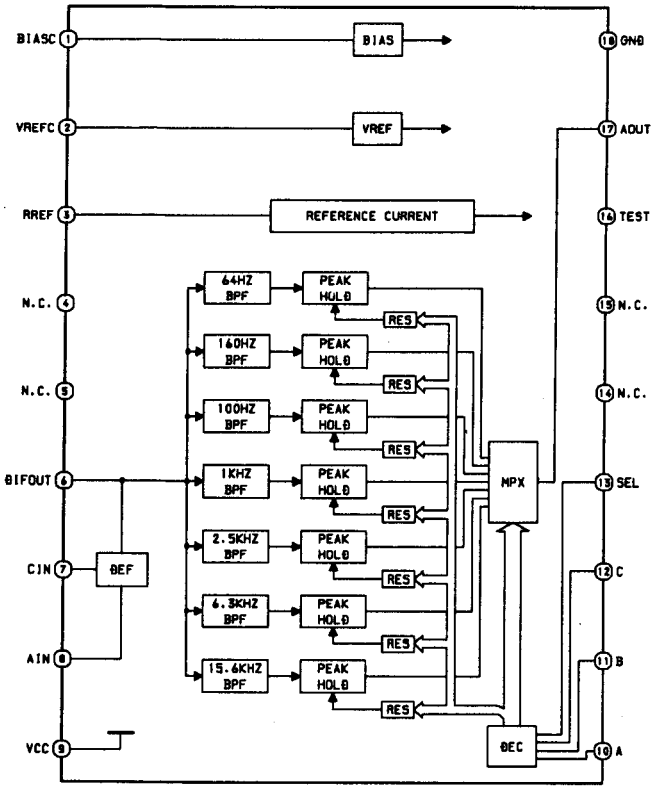
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Q7	NO Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↑	H	H	H	H	Qn-1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

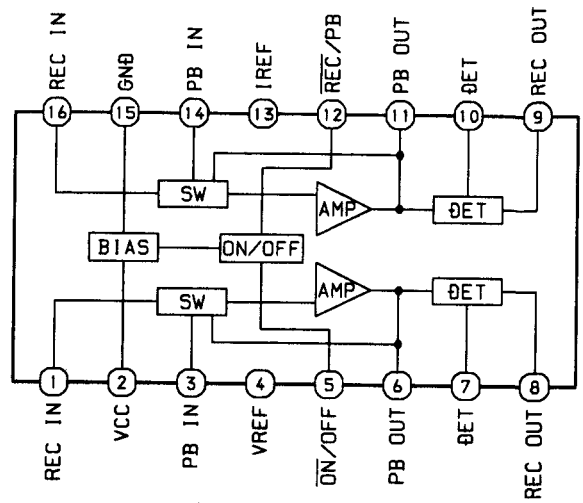
Z=High Impedance

X=Don't Care

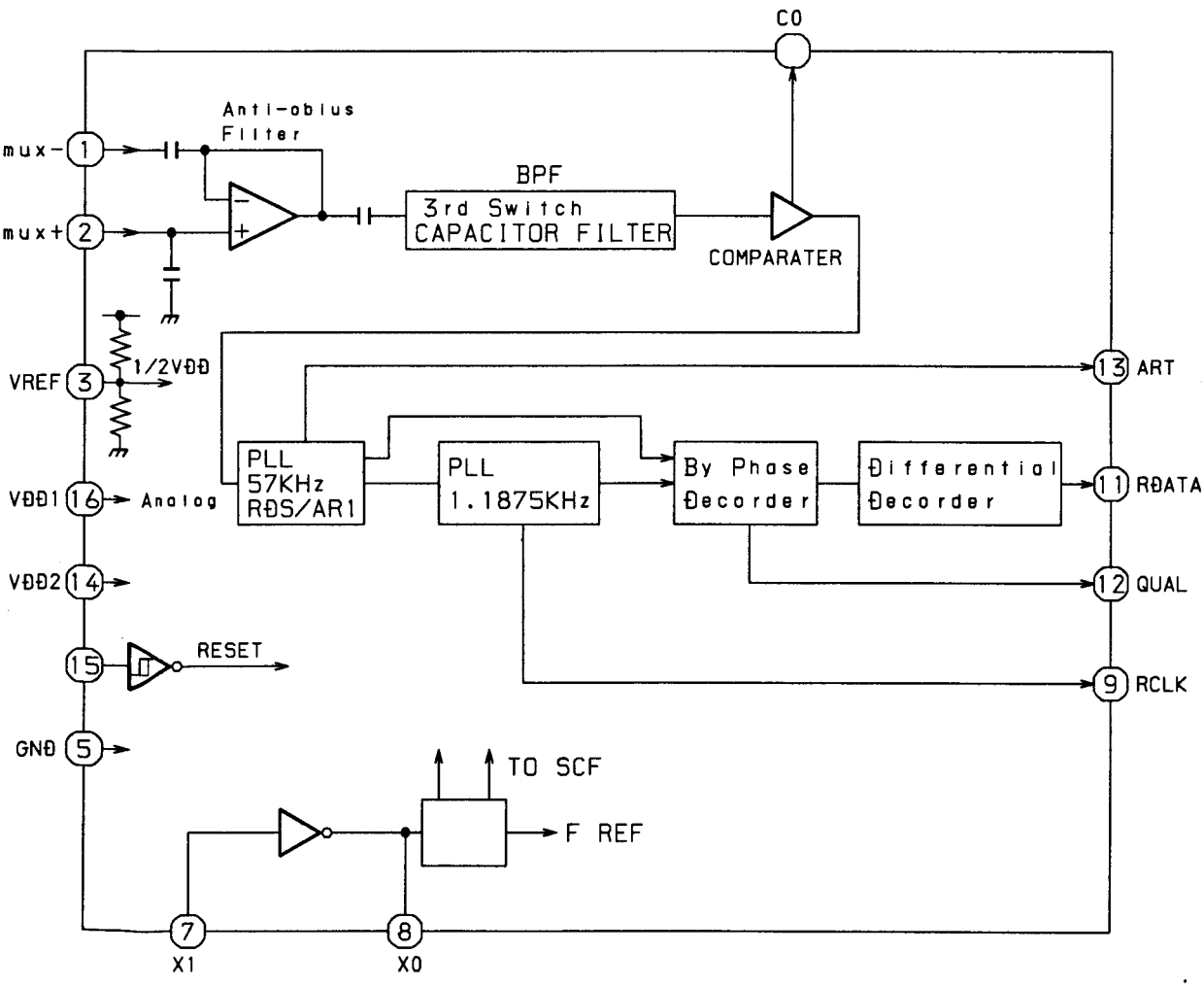
IC, BA3834S



IC, HA12134A



IC, BU1921FS



IC DESCRIPTION

IC, LC866432V-5A45

Pin No.	Pin Name	I/O	Description
1	O-PLL CE	O	PLL IC chip enable.
2	O-DSP/CE	O	DSP data latch strobe output.
3	O-M/STB	O	Main shift register data latch strobe output.
4	O-M/DATA	O	Main shift register, PLL/Key control/DSP related data output.
5	O-M/CLK	O	Main shift register, PLL/Key control/DSP related clock.
6	I-HP	I	Not used. Connect Pin 10 with RES.
7	$\overline{\text{RESET}}$	I	Reset input.
8	I-$\overline{\text{STEREO}}$	I	Tuner stereo detected input.
9	I-$\overline{\text{TUNE/IFC}}$	I	Tuner $\overline{\text{SD}}$ detected input. IF count serial data input.
10	VSS1	-	GND.
11,12	CF1, 2	-	5.76 MHz oscillator circuit.
13	VDD1	-	Power supply input.
14~16	I-KEY1 - 3	I	Key input. (A/D)
17	I-CD/SW	I	CD mechanical switch A/D converter input.
18	I-CD/DISH	I	CD turntable photo sensor A/D converter input.
19	I-MS	I	Deck music sensor signal input.
20	I-SPEANA	I	A/D input for spectrum analyzer display.
21	I-MIC	I	Microphone input for auto VF display.
22	I-TM BASE	I	Reference clock input for timer watch.
23	I-$\overline{\text{HOLD}}$	I	Power failure detected input "L" to stop clock and maintain memory.
24	I-$\overline{\text{RMC}}$	I	System remote control signal input.
25~35	G11~G1	O	FL grid output G11~G1.
36~40	P23~P19	O	FL segment output P23~P19.
41	VDD2	-	Power supply input.
42	-VP	-	Power supply input (-34.5V) for FL display.
43	P18/$\overline{\text{CST1}}$	O/I	FL segment output P18, DECK1 cassette detect switch data input.
44	P17/$\overline{\text{AUTO1}}$	O/I	FL segment output P17, DECK1 auto stop signal input.
45	P16/$\overline{\text{CAM1}}$	O/I	FL segment output P16, DECK1 cam switch data input.
46	P15/$\overline{\text{CAM2}}$	O/I	FL segment output P15, DECK2 cam switch data input.
47	P14/$\overline{\text{AUTO2}}$	O/I	FL segment output P14, DECK2 auto stop signal input.
48	P13/$\overline{\text{CST2}}$	O/I	FL segment output P13, DECK2 cassette detect switch data input.
49	P12/REA2	O/I	FL segment output P12, DECK2 side-A record OK switch data input.
50	P11/REB2	O/I	FL segment output P11, DECK2 side-B record OK switch data input.
51	P10/NO·ECHO	O/I	FL segment output P10, NO·ECHO mode data input to diode.
52	P1/AM-ST,FM-W	O/I	FL segment output P1, AM stereo, FM-WIDE mode data input to diode.
53	P2/AM10K	O/I	FL segment output P2, AM 10kHz step data input to diode.
54	P3/LW	O/I	FL segment output P3, LW mode data input to diode.
55	P4/SW	O/I	FL segment output P4, SW mode data input to diode.
56	P5	O	FL segment output P5.
57	P6/NO·DSP	O/I	FL segment output P6, NO·DSP data input to diode.
58	P7/KEY·CON	O/I	FL segment output P7, key control data input to diode.

Pin No.	Pin Name	I/O	Description
59	P8/PAL	O/I	FL segment output P8, PAL data input to diode.
60	P9/OIRT	O/I	FL segment output P9, OIRT mode data input to diode.
61	O-CLOSE	O	CD tray close data output.
62	O-OPEN	O	CD tray open data output.
63	O-DI/R	O	CD turntable reverse rotation output.
64	O-DI/F	O	CD turnable forward rotation output.
65	O-$\overline{\text{POWER}}$	O	System power supply $\overline{\text{ON}}$/OFF output.
66	O-$\overline{\text{SOL1}}$	O	DECK1 solenoid output.
67	O-$\overline{\text{SOL2}}$	O	DECK2 solenoid output.
68	O-$\overline{\text{MOTOR}}$	O	DECK motor output.
69	O-$\overline{\text{KEY·SCAN}}$	O	Switch scan timing output.
70	O-F/STB	O	Front shift register, data latch strobe output.
71	O-F/CLK	O	Front shift register, data transfer clock output.
72	O-F/DATA	O	Front shift register, data output.
73	VSS2	-	GND.
74	O-CD/DATA	O	CD IC control data output.
75	O-CD/XTL	O	CD IC control latch strobe output.
76	O-CD/CLK	O	CD IC control clock output.
77	I-CD/SENSE	I	CD IC control data bus data input.
78	O-CD/SQ·DATA	O	CD IC control data bus data output.
79	O-CD/SQ·CLK	O	CD IC control data bus clock output.
80	O-MUTE	O	System mute output.

IC, LC72131D

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>XIN</td><td rowspan="2">–</td><td rowspan="2">A crystal oscillator (7.2MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>XOUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU (LC866432V-5A45) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CLK</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU (LC866432V-5A45).</td></tr>
<tr><td>7</td><td>TM-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / AM</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IFIN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>A MIN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>F MIN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>AIN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>AOUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>

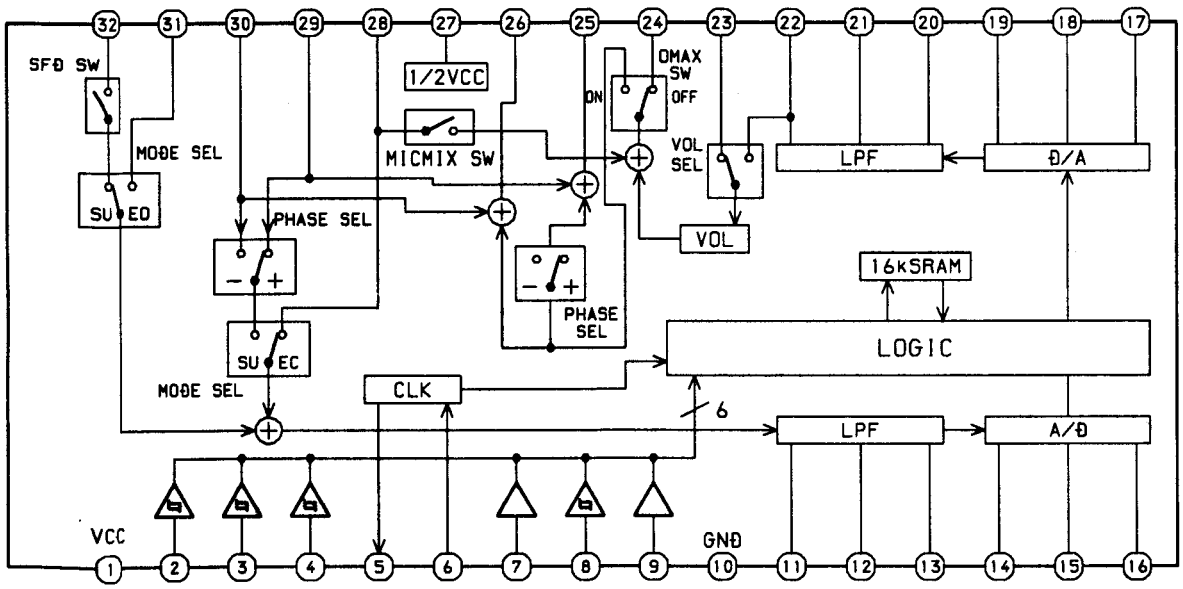
IC, LC866448W-5B86

Pin No.	Pin Name	I/O	Description
1	O-PLL CE	O	PLL IC chip enable.
2	O-DSP/CE	O	DSP data latch strobe output.
3	O-M/STB	O	Main shift register data latch strobe output.
4	O-M/DATA	O	Main shift register, PLL/Key control/DSP related data output.
5	O-M/CLK	O	Main shift register, PLL/Key control/DSP related clock.
6	I-HP	I	Not used. Connect Pin 10 with RES.
7	$\overline{\text{RESET}}$	I	Reset input.
8	I-DI-SENS	I	CD / Turn table sensor input.
9	I-$\overline{\text{TUNE/IFC}}$	I	Tuner $\overline{\text{SD}}$ detected input. IF count serial data input.
10	VSS1	-	GND.
11,12	CF1, 2	-	5.76 MHz oscillator circuit.
13	VDD1	-	Power supply input.
14~16	I-KEY1 - 3	I	Key input. (A/D)
17	I-CD/SW	I	CD mechanical switch A/D converter input.
18	I-RDSIG	I	RDS IC / Qual input.
19	I-MS	I	Deck music sensor signal input.
20	I-SPEANA	I	A/D input for spectrum analyzer display.
21	I-MIC	I	Microphone input for auto VF display.
22	I-$\overline{\text{HOLD}}$	I	Power failure detected input "L" to stop clock and maintain memory.
23	I-RDCLK	I	RDS IC/ R CLK input.
24	I-$\overline{\text{RMC}}$	I	System remote control signal input.
25~36	G12~G1	O	FL grid output G12~G1.
37~40	P22~P19	O	FL segment output P22~P19.
41	VDD2	-	Power supply input.
42	-VP	-	Power supply input (-34.5V) for FL display.
43	P18/$\overline{\text{CST1}}$	O/I	FL segment output P18, DECK1 cassette detect switch data input.
44	P17/$\overline{\text{AUTO1}}$	O/I	FL segment output P17, DECK1 auto stop signal input.
45	P16/$\overline{\text{CAM1}}$	O/I	FL segment output P16, DECK1 cam switch data input.
46	P15/$\overline{\text{CAM2}}$	O/I	FL segment output P15, DECK2 cam switch data input.
47	P14/$\overline{\text{AUTO2}}$	O/I	FL segment output P14, DECK2 auto stop signal input.
48	P13/$\overline{\text{CST2}}$	O/I	FL segment output P13, DECK2 cassette detect switch data input.
49	P12/REA2	O/I	FL segment output P12, DECK2 side-A record OK switch data input.
50	P11/REB2	O/I	FL segment output P11, DECK2 side-B record OK switch data input.
51	P10/I-TM BASE	O/I	FL segment output P10, reference clock input for timer watch.
52	P1/AM-ST,FM-W	O/I	FL segment output P1, AM stereo, FM-WIDE mode data input to diode.
53	P2/AM10K	O/I	FL segment output P2, AM 10kHz step data input to diode.
54	P3/NO LW	O/I	FL segment output P3.
55	P4/SW	O/I	FL segment output P4, SW mode data input to diode.
56	P5	O	FL segment output P5.
57	P6/NO·DSP	O/I	FL segment output P6, NO·DSP data input to diode.
58	P7/NO RDS	O/I	FL segment output P7, NO RDS data input to diode.

Pin No.	Pin Name	I/O	Description
59	P8/PAL	O/I	FL segment output P8, PAL data input to diode.
60	P9/OIRT	O/I	FL segment output P9, OIRT mode data input to diode.
61	O-CLOSE	O	CD tray close data output.
62	O-OPEN	O	CD tray open data output.
63	O-DI/R	O	CD turntable reverse rotation output.
64	O-DI/F	O	CD turnable forward rotation output.
65	O-$\overline{\text{POWER}}$	O	System power supply $\overline{\text{ON}}$/OFF output.
66	O-$\overline{\text{SOL1}}$	O	DECK1 solenoid output.
67	O-$\overline{\text{SOL2}}$	O	DECK2 solenoid output.
68	O-$\overline{\text{MOTOR}}$	O	DECK motor output.
69	O-$\overline{\text{KEY-SCAN}}$	O	Switch scan timing output.
70	O-F/STB	O	Front shift register, data latch strobe output.
71	O-F/CLK	O	Front shift register, data transfer clock output.
72	O-F/DATA	O	Front shift register, data output.
73	VSS2	-	GND.
74	O-CD/DATA	O	CD IC control data output.
75	O-CD/XTL	O	CD IC control latch strobe output.
76	O-CD/CLK	O	CD IC control clock output.
77	I-CD/SENSE/I-RD-DA	I	CD IC control data bus data input / latch strobe output / RDS data input.
78	O-CD.SQ DATA/ I-$\overline{\text{STEREO}}$	O/I	CD IC control data bus data output / $\overline{\text{STEREO}}$ input.
79	O-CD/SQ-CLK	O	CD IC control data bus clock output.
80	O-MUTE	O	System mute output.

IC BLOCK DIAGRAM – 2

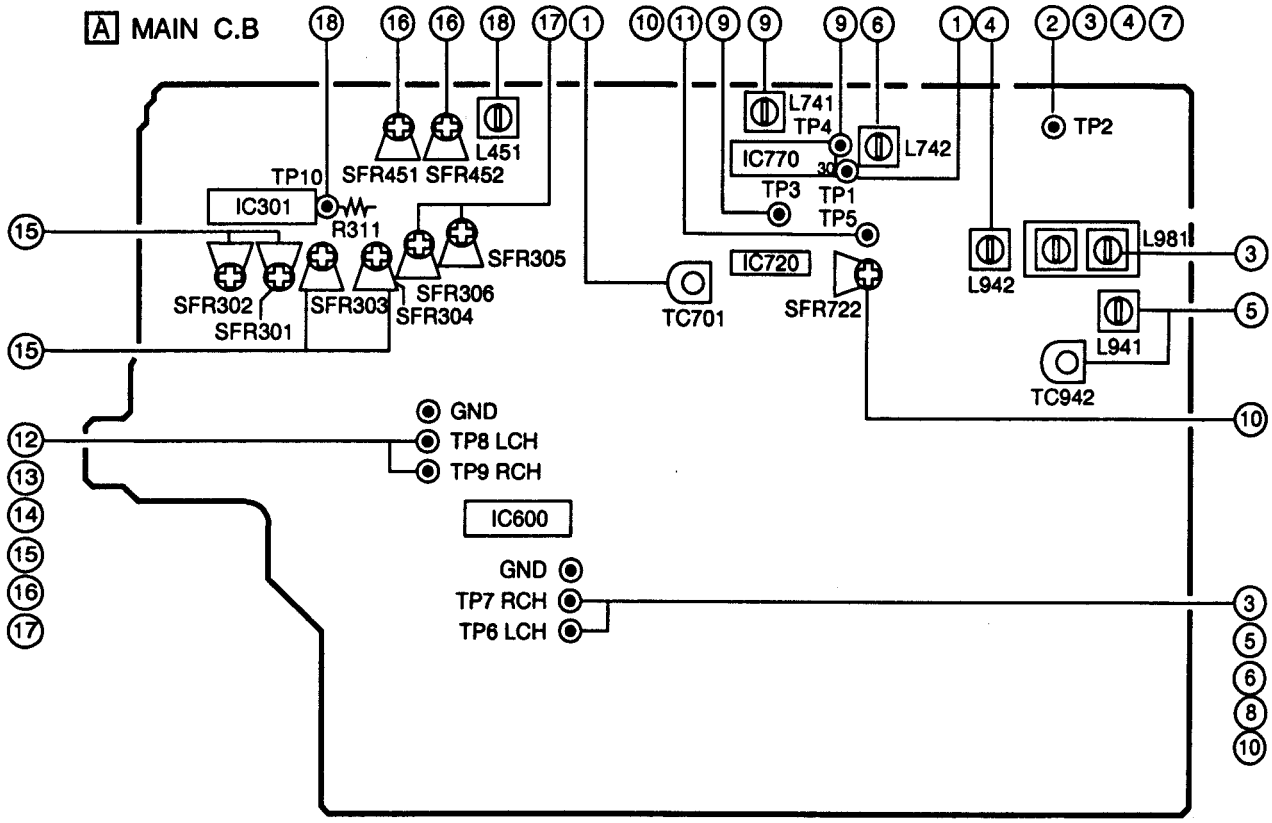
IC, M65846FP-600D

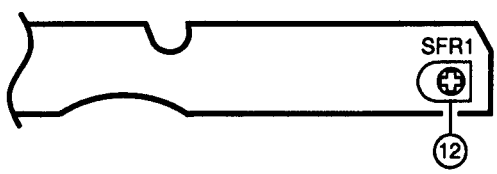


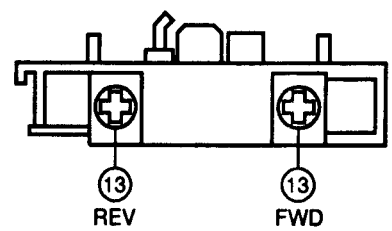
: SCHMIT TRIGGER BUFFER (WITH PULLDOWN)

: CMOS BUFFER (WITH PULLDOWN)

ADJUSTMENT <TUNER / DECK>







< TUNER SECTION >

1. Clock Frequency Adjustment
   Settings : • Test point : TP1 (CLK IC770 pin30)
   • Adjustment location : TC701
   Method : Set to MW 1602kHz and adjust TC701 so that the test point becomes 2052kHz ± 0.01kHz.

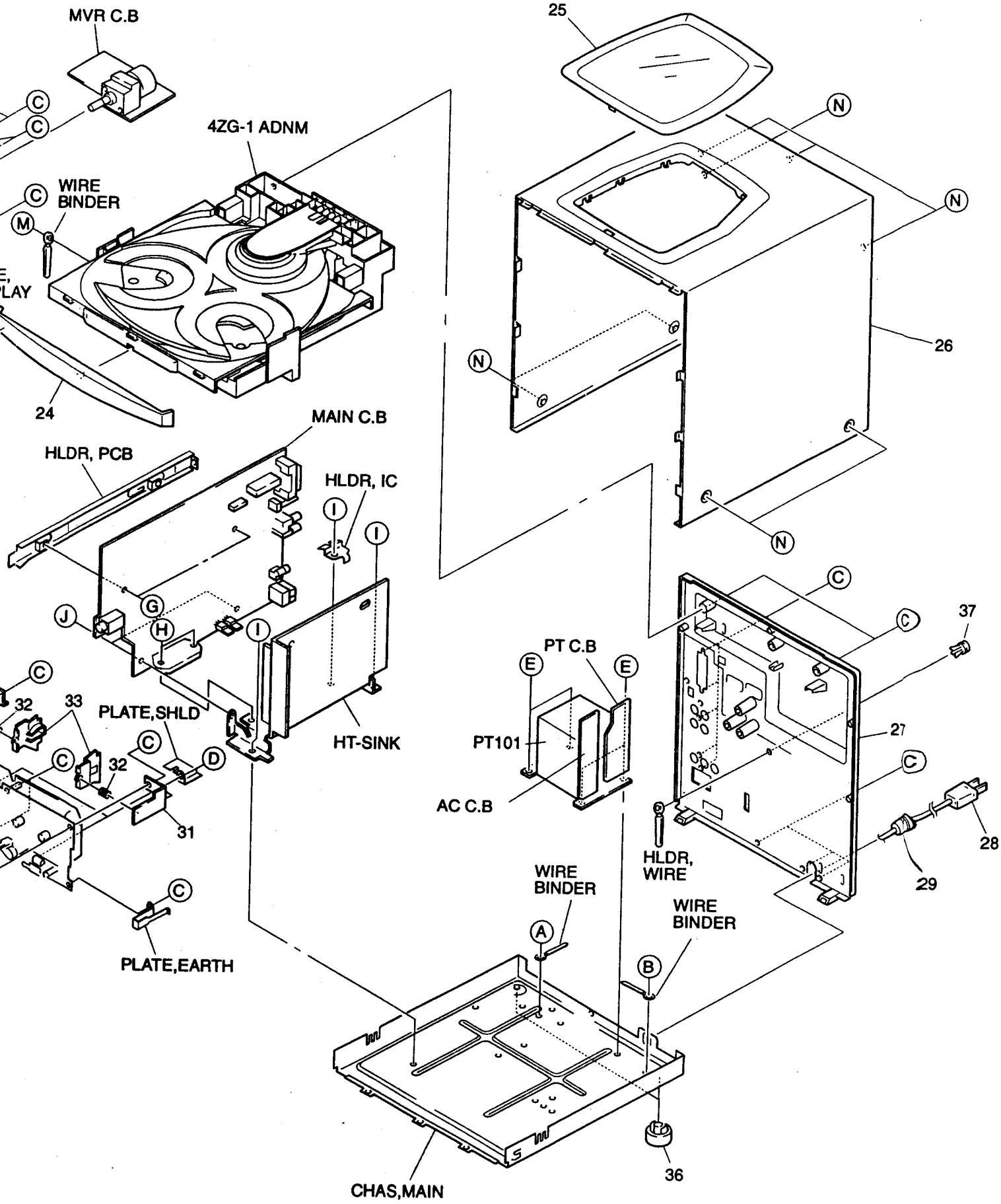
2. MW VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to MW 1602kHz and check that the test point is 6.8V ± 1.0V.

3. MW Tracking Adjustment
   Settings : • Test point : TP6, TP7
   • Adjustment location :
   L981 ..... 999kHz
   Method : The level at 999kHz is adjusted to MAX by L981.

4. LW VT Adjustment
   Settings : • Test point : TP2 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V ± 0.05V.

5. LW Tracking Adjustment
   Settings : • Test point : TP6, TP7
   • Adjustment location :
   L941 ..... 144kHz
   TC942 ..... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

6. AM IF Adjustment
   Settings : • Test point : TP6, TP7
   • Adjustment location :
   L742..... 450kHz


MVR C.B
4ZG-1 ADNM
WIRE BINDER
24
25
26
MAIN C.B
HLDR, PCB
HLDR, IC
HT-SINK
PLATE,SHLD
PLATE,EARTH
PT C.B
PT101
AC C.B
HLDR, WIRE
WIRE BINDER
WIRE BINDER
CHAS,MAIN
27
28
29
31
32
33
36
37

7. FM VT Check
   Settings : • Test point : TP2 (VT)
   Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 1.3V (87.5MHz) and less than 8.0V(108.0MHz).

8. FM Tracking Check
   Settings : • Test point : TP6, TP7
   Method : • Set to FM 98.0MHz and check that the test point is 6dB ± 6dB.

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC balance)
   : TP6, TP7 (Distortion)
   • Adjustment location : L741
   • Input level : 54dB
   Method : Set to FM 98.0MHz, and adjust L741 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V.
   Next, check that the distortion is less than 1.3%.

10. Auto Stop Level Adjustment
    Settings : • Test point : TP5
    • Adjustment location : SFR722
    • Input level : 16dB
    Method : • Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) by 2dB down.

11. Auto Stop Level Check
    MW
    Settings : • Test point : TP5
    • Input level : 50dB
    Method : Set to MW 999kHz and check that the test point is 45 ~ 65 dB.

    FM
    Settings : • Test point : TP5
    • Input level : 18dB
    Method : Set to FM 98.0MHz and check that the test point is 20 dB ± 5 dB.

< DECK SECTION >

12. Tape Speed Adjustment
    Settings : • Test tape : TTA–100
    • Test point : TP8, TP9
    • Adjustment location : SFR1
    Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

13. Head Azimuth Adjustment
    Settings : • Test tape : TTA–300
    • Test point : TP8, TP9
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD and REV PLAYmode.

14. PB Frequency Response Check (DECK 1, DECK 2)
    Settings : • Test tape : TTA–300
    • Test point : TP8, TP9
    Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is ±2dB

15. PB Sensitivity Adjustment (DECK 1, DECK 2)
    Settings : • Test tape : TTA–200
    • Test point : TP8, TP9
    • Adjustment location :
    SFR301 (DECK 1, Lch)
    SFR302 (DECK 1, Rch)
    SFR303 (DECK 2, Lch)
    SFR304 (DECK 2, Rch)
    Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 300mV.

16. REC/PB Frequency Response Adjustment
    Settings : • Test tape : TTA–602
    • Test point : TP8, TP9
    • Input signal : 1kHz / 10kHz (LINE IN)
    • Adjustment location : SFR451 (Lch)
    SFR452 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that theoutput level at the TP8, TP9 becomes 17mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

17. REC/PB Sensitivity Adjustment
    Settings : • Test tape : TTA–602
    • Test point : TP8, TP9
    • Input signal : 1kHz (LINE IN)
    • Adjustment location : SFR305 (Lch)
    SFR306 (Rch)
    Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 17mV. Record and play back the 1kHz signals and adjust SFRs so that the output is 17mV ± 0.5dB.

18. Bias OSC Frequency Adjustment
    Settings : • Test tape : TTA–615
    • Test point : TP10 (R311)
    • Adjustment location : L451
    Method : Set to the REC mode. Adjust L451 so that the frequency counter of the test point becomes 85 kHz ± 1 kHz.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>
<FM SECTION>

IHF Sensitivity :	-2dB ~ 14dB<820EZ,NAPIMK3EZ>
(THD 3%)	-1dB ~ 11dB<V>
	[at 87.5 / 98.0MHz]
	0dB ~ 16dB<820EZ,NAPIMK3EZ>
	2dB ~ 14dB<V>
	[at 108.0MHz]
	2dB ~ 14dB<V>
	[at 65.0/70.0/74.0MHz]
S/N 46dB<EZ>,50dB<V>	
Quieting sensitivity :	<820 EZ,NAPIMK3EZ>
	Less than 39dB
	[at 87.5 / 98.0 / 108.0MHz]
	<V>
	Less than 39dB
	[at 65.0 / 70.0 / 74.0MHz]
Signal to noise ratio :	<820EZ,NAPIMK3EZ>
	(MONO) More than 60dB
	(STEREO) More than 57dB
	[at 98.0MHz]
	<V>
	(MONO) More than 65dB
	(STEREO) More than 64dB
	[at 98.0MHz]
Distortion :	(MONO) Less than 1.3%
	[at 98.0MHz]
	(STEREO) Less than 2.0%
	[at 98.0MHz]
Auto stop level :	20dB ± 10dB [at 98.0MHz]
Stereo separation :	More than 20dB [at 98.0MHz]
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

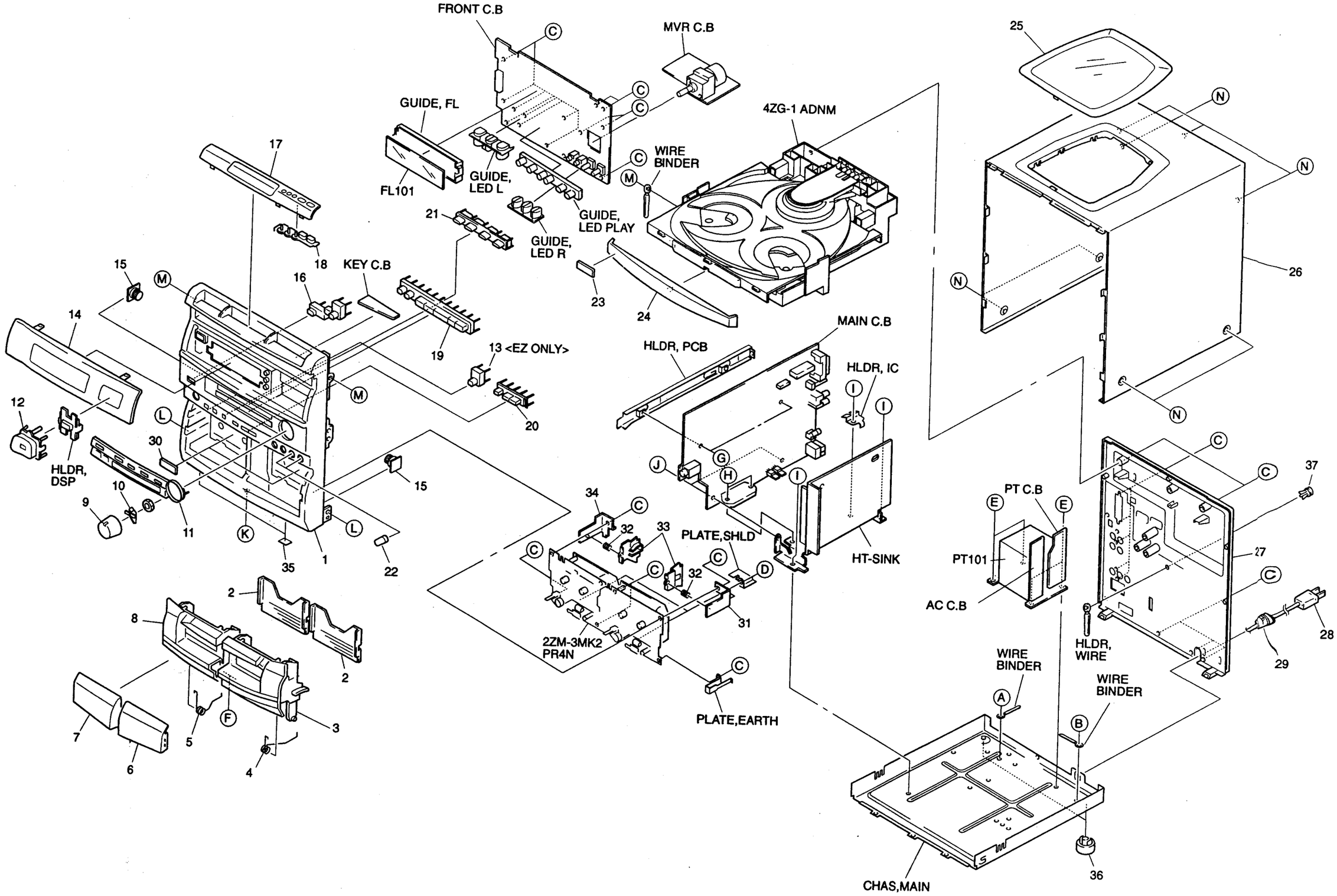
Sensitivity :	52 ~ 62dB
(S/N 20 dB)	[at 603kHz]
	48 ~ 58dB
	[at 999 / 1404kHz]
Signal to noise ratio :	More than 36dB
	[at 999kHz]
Distortion :	Less than 1.5%
	[at 999kHz]
Auto stop level :	40 ~ 65dB
	[at 999kHz]
Intermediate frequency :	450kHz

<LW SECTION>

Sensitivity :	64dB ± 5dB (144kHz)
(S/N 20dB)	62dB ± 5dB (198kHz)
	60dB ± 5dB (290kHz)
Distortion :	Less than 1.4% (198kHz)
Intermediate frequency :	450kHz

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.15%
	(R.M.S)
Take-up torque :	30 ~ 55g-cm
	(FWD, REV)
F.F & REW torque :	75 ~ 160g-cm
Back tension :	2 ~ 7g-cm
	(FWD, REV)
PB output level :	2.8V ± 2dB
	(SP OUT 2V)
REC/PB output level :	1.6V ± 2dB
	(SP OUT 2V)
Distortion (REC/PB) :	Less than 2.0%
	(NORM, CrO_2)
Noise level (PB) :	Less than 110mV
	(NORM, SP OUT 2V)
	Less than 90mV
	(CrO_2, SP OUT 2V)
Noise level (REC/PB) :	Less than 120mV
	(DOLBY OFF, NORM, SP OUT 2V)
	Less than 100mV
	(DOLBY OFF, CrO_2, SP OUT 2V)
Crosstalk :	More than 58dB
	(1kHz, 0VU)
Channel separation :	More than 45dB
	(1kHz, 0VU)
Erasing ratio :	More than 60dB
	(at 125Hz)
Test tape :	TTA–602 (NORMAL)
	TTA–615 (CrO_2)

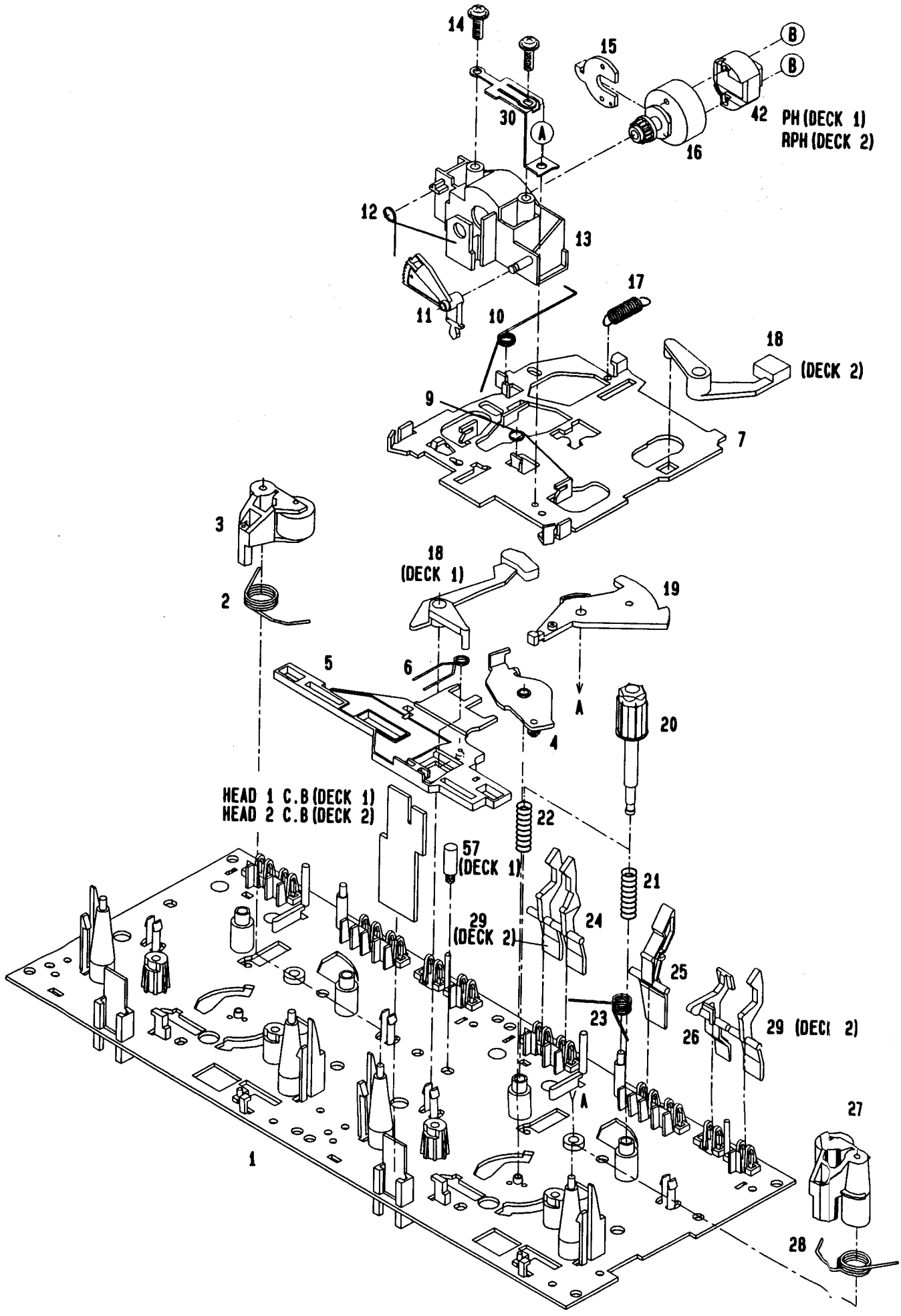

FRONT C.B
MVR C.B
GUIDE, FL
FL101
GUIDE, LED L
GUIDE, LED PLAY
GUIDE, LED R
4ZG-1 ADNM
WIRE BINDER
17
18
21
23
24
KEY C.B
15
16
19
13 <EZ ONLY>
20
14
12
HLDR, DSP
30
10
9
11
K
35
1
L
22
15
MAIN C.B
HLDR, PCB
HLDR, IC
G
H
I
J
HT-SINK
34
32
33
PLATE,SHLD
D
31
2ZM-3MK2 PR4N
PLATE,EARTH
2
8
2
7
6
5
F
4
3
25
N
26
PT C.B
E
PT101
AC C.B
C
37
27
28
29
HLDR, WIRE
WIRE BINDER
WIRE BINDER
A
B
36
CHAS,MAIN

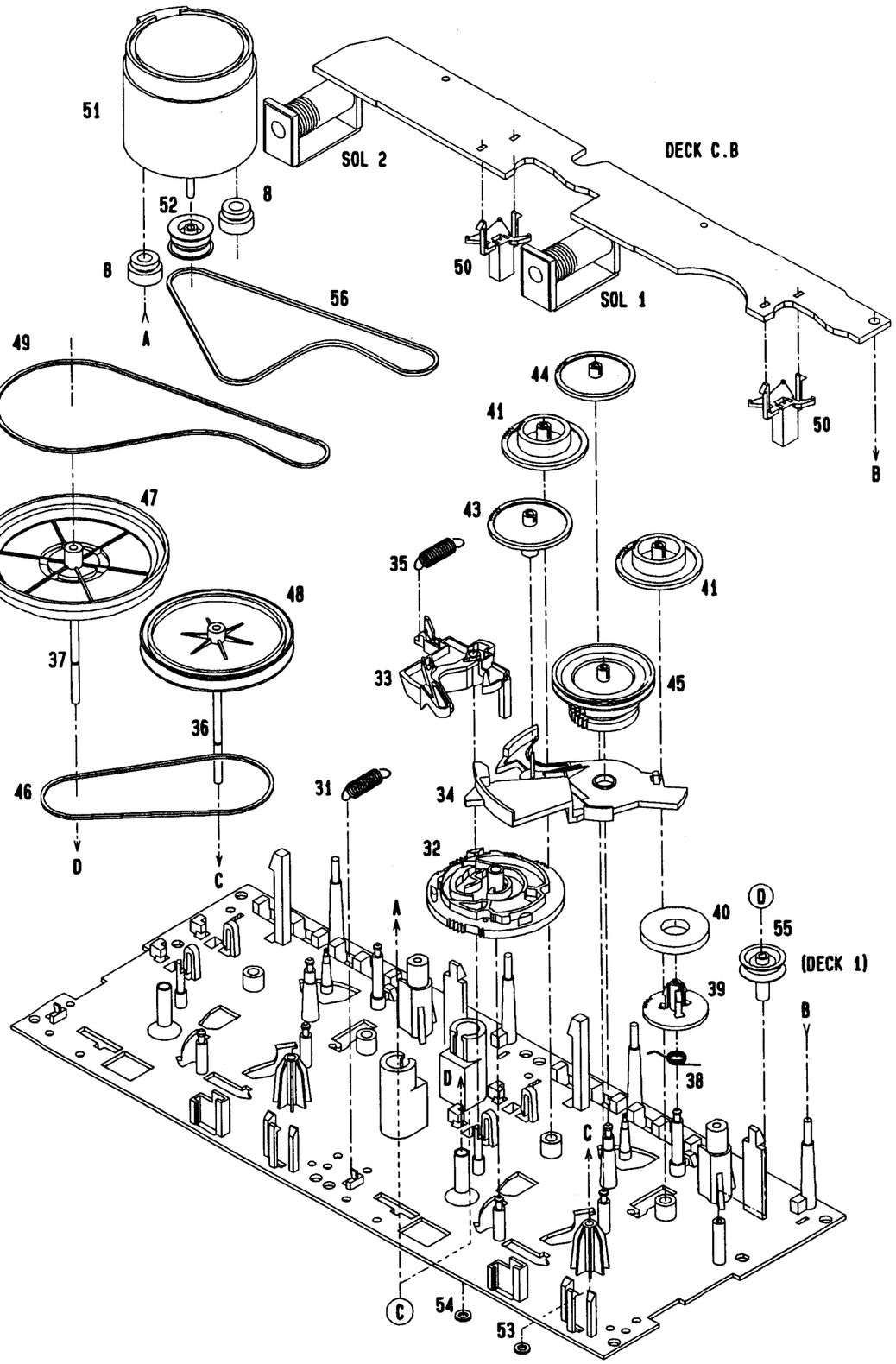
MECHANICAL PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NF5-073-010		CABI,FR AP1(RDS)<AP1MK3EZ>
1	86-NF5-026-110		CABI,FR E<800V>
1	86-NF5-061-010		CABI,FR E(RDS)<820EZ>
2	86-NF6-061-010		REFLECTOR,CASS
3	86-NF5-029-010		BOX,CASS R E
4	82-NF5-219-010		SPR-T,EJECT 2(SIN)
5	82-NF5-218-010		SPR-T,EJECT 1(SIN)
6	86-NF5-007-010		WINDOW,CASS R
7	86-NF5-006-010		WINDOW,CASS L
8	86-NF5-028-010		BOX,CASS L E
9	86-NF5-020-010		KNOB,RTRY MAIN
10	86-NF5-021-010		LENS,VOL
11	86-NF5-009-010		PANEL,FUN
12	86-NF5-019-110		KEY,DSP
13	86-NF5-063-010		KEY,RDS<EXCEPT 800V>
14	86-NF5-004-010		WINDOW,DISPLAY<800V>
14	86-NF5-062-010		WINDOW,DISPLAY (RDS)<EXCEPT 800V>
15	87-063-165-010		OIL-DMPR,150
16	86-NF5-010-010		KEY,POWER
17	86-NF5-005-010		WINDOW,CD
18	86-NF5-018-010		KEY,OPEN
19	86-NF5-016-010		KEY,PLAY
20	86-NFF-015-010		KEY,KARAOKE<EXCEPT 800V>
20	86-NF5-017-010		KEY,KARAOKE<800V>
21	86-NF5-011-010		KEY ASSY,FUN
22	86-NF6-050-010		KNOB,RTRY MIC M
23	82-NE6-067-010		BADGE,AIWA 30N
24	86-NF5-030-010		PANEL,TRAY E
25	86-NF6-007-010		WINDOW,TOP
26	86-NF6-002-010		CABI,STEEL<800V>
26	86-NF6-057-010		CABI,STEEL G<EXCEPT 800V>
27	86-NF5-074-010		PANEL,REAR EEZBNE (AP1)<AP1MK3EZ>
27	86-NF5-072-010		PANEL,REAR EEZBNE (RDS)<820EZ>
27	86-NF5-039-010		PANEL,REAR VJBNM<800V>
⚠ 28	87-050-016-010		AC CORD ASSY,E<EXCEPT 800V>
⚠ 28	87-050-079-010		AC CORD ASSY,E BLK<800V>
29	87-085-185-010		BUSHING,AC CORD(E) CM-22B
30	81-532-080-010		LBL,CASS-COMPT
31	82-NF5-227-010		HLDR,LOCK 2N(*)
32	82-NF5-228-010		SPR-C,LOCK
33	82-NF5-229-010		PLATE,LOCK(*)
34	82-NF5-226-010		HLDR,LOCK 1N(*)
35	80-VT1-202-010		FELT,12.5-15.5-2
36	87-085-221-010		FOOT, H 13.5
37	87-084-077-010		RIVET, NYL3.5-4.5
A	87-067-585-010		BVTT+4-6
B	87-067-584-010		BVT2+3-6 W/O SLOT
C	87-067-703-010		BVT2+3-10 W/O SLOT
D	87-571-032-410		VIT+2-3
E	87-078-083-010		BVTT+4-8 SWCH16A SEMS
F	82-NE8-215-010		W,4.2-6.8-0.18
G	87-078-084-010		BVTT+3-6 W/CONVEX
H	87-067-581-010		BVT2+3-15 W/O SLOT
I	87-067-579-010		BVT2+3-8 W/O SLOT
J	87-067-633-010		BVT2+3-8 W/O SLOT W/CONVEX
K	87-067-716-010		BVTT+3-6 BLK
L	87-591-094-410		QIT+3-6
M	87-721-097-410		QT2+3-12 W/O SLOT
N	87-067-641-010		UTT2+3-8 W/O SLOT BLK

TAPE MECHANISM EXPLODED VIEW 1/1



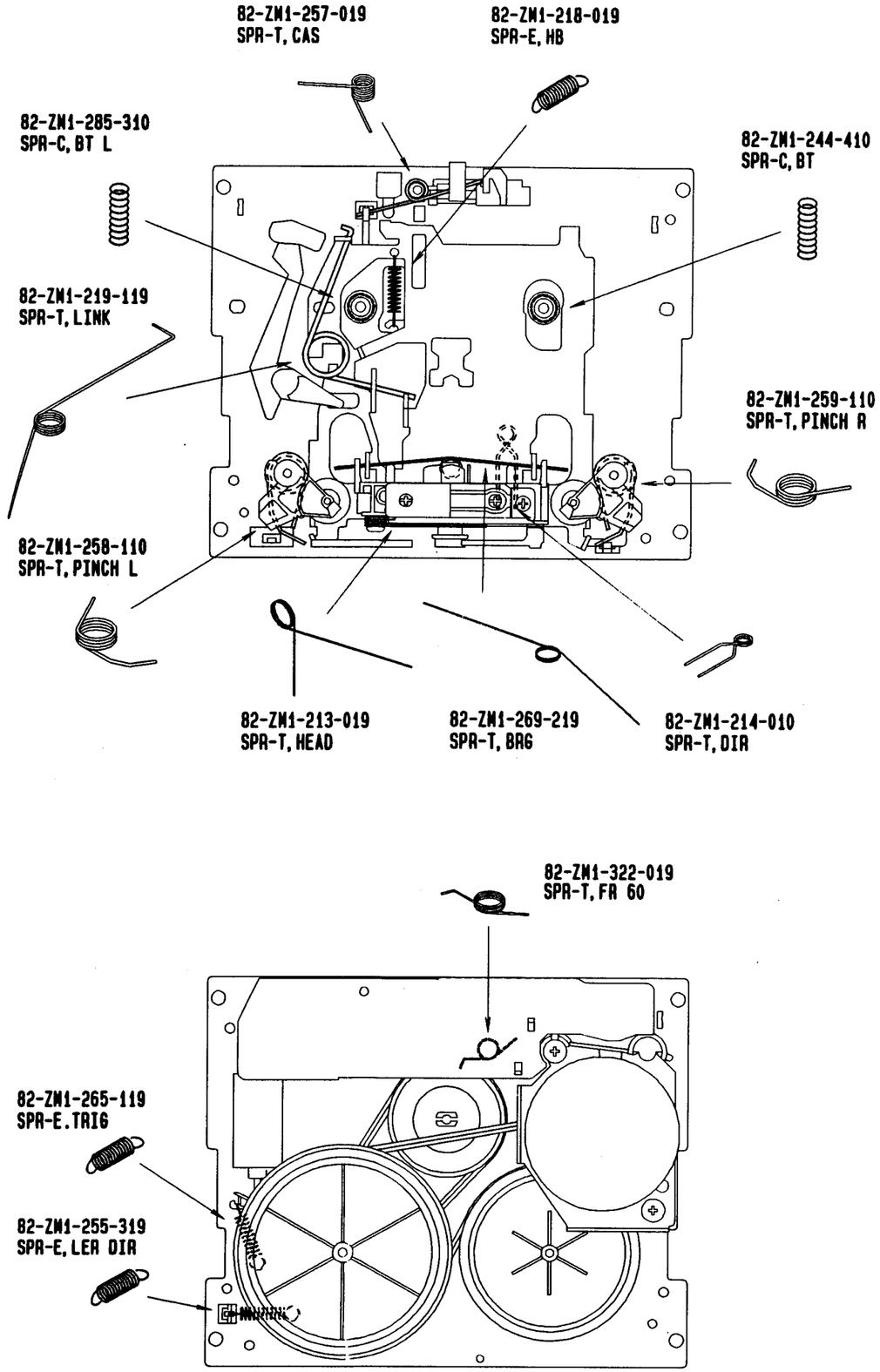


TAPE MECHANISM PARTS LIST 1/1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-345-019		LVR ASSY,PINCH L W
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-346-019		LVR ASSY,PINCH R W
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
30	82-ZM1-298-010		SPR-P,EARTH
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-046-355-019		HEAD,PH HADKH2529B(PH)
42	87-046-356-019		HEAD,RPH HADKH5581B(RPH)
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM1-228-810		SLIP DISK ASSY
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-238-81K		FLY-WHL ASSY,R (DECK 2)
47	82-ZM3-210-71K		FLY-WHL ASSY,R2 (DECK 1)
48	82-ZM1-235-51K		FLY-WHL ASSY,L (DECK 2)
48	82-ZM3-208-61K		FLY-WHL ASSY,L2 (DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-304-110		PULLEY,COUPLER (DECK 1)
56	82-ZM3-328-110		BELT,SBU P2
57	82-ZM3-216-019		SHAFT,COUPLER N(DECK 1)
A	82-ZM1-315-010		S-SCREW,GVIDE TAPE
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-067-972-019		PW,1.05-3-0.25 SLT

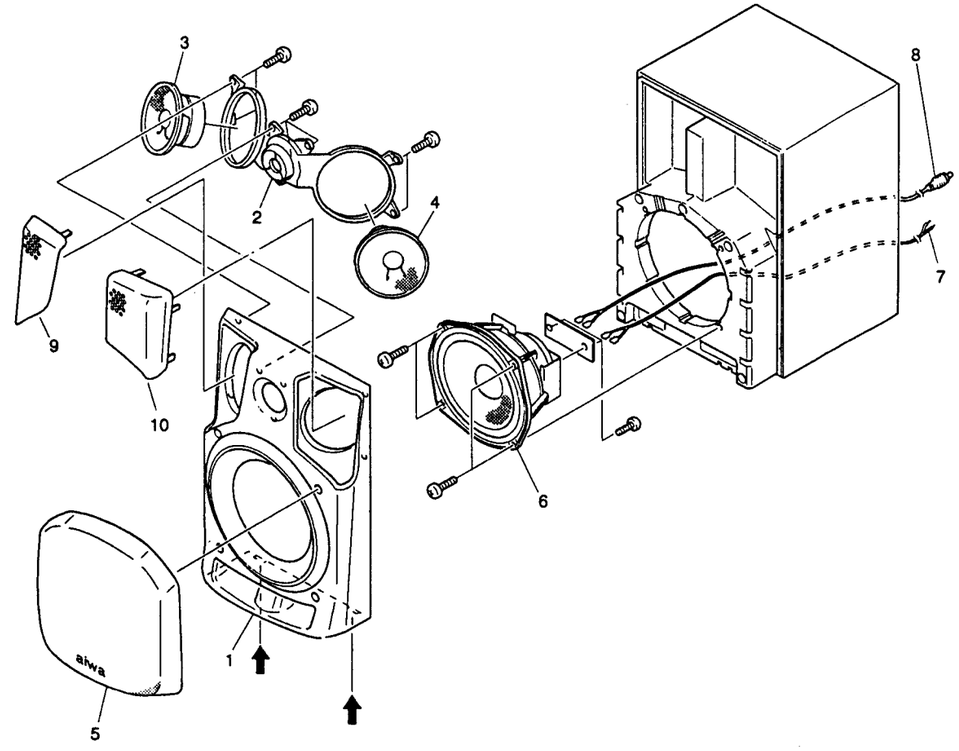
SPRING APPLICATION POSITION



SPEAKER DISASSEMBLY INSTRUCTIONS

矢印の位置にマイナスドライバーを差し込んで、パネルをはずして、各々のスピーカー・ユニットのビスを取り、スピーカー・ユニットをはずしてください。

Insert a flat - bladed screwdriver into the position indicated by the arrows and remove the panel.
Remove the screws of each speaker unit and then remove the speaker units.



SPEAKER PARTS LIST 1/1 (SX-FNV800)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NS5-001-019		PANEL FR
2	86-NS5-028-019		HLDR SQ ASSY
3	86-NS5-604-019		SPEAKER TWEETER
4	86-NS5-606-019		SPEAKER
5	86-NS5-007-019		GRILLE FRAME ASSY
6	86-NS5-602-019		SPEAKER WOOFER
7	83-NS5-613-019		SPEAKER CORD ASSY
8	85-NS6-611-019		SPEAKER CORD Y/B
9	86-NS5-011-019		PROTECTOR TW L
10	86-NS5-010-019		PROTECTOR TW R

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	86-NF5-915-018		IB,E(EGFSI)NE<820EZ>
1	86-NF5-916-019		IB,V-M<V>
1	86-NF5-917-019		IB,E(EG)NE<NAP1MK3EZ>
2	85-NF5-631-018		RC-T501<V>
2	85-NF5-633-018		RC-T501<820EZ,NAP1MK3EZ>
3	87-006-225-019		AM LOOP ANT NC2
4	87-043-106-019		FM, WIRE ANT (Z)<820EZ,NAP1MK3EZ>
4	87-043-115-019		FEEDER-ANT, FM<V>

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	連絡内容
G－ －	
G－ －	
G－ －	

アイワ株式会社
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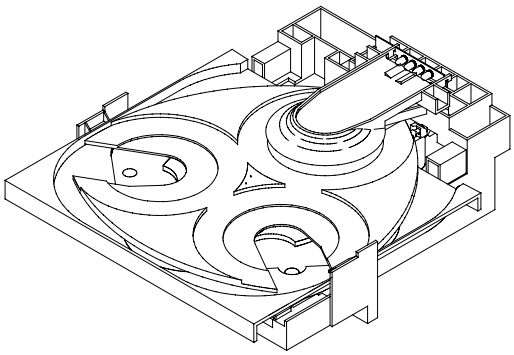
Tokyo Japan
Printed in Singapore

aiwa

aiwa SERVICE

4ZG-1



CD MECHANISM

• BASIC CD MECHANISM:3ZG-2 E1

• TYPE: English

SERVICE MANUAL

BASIC NAME	DERIVATION NAME					
4ZG-1	V	O	S1	D	SH	

■ This Service Manual has various derivation.Derivation name is indicated by the Service Manual for each model.

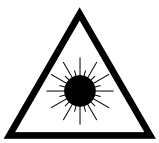
S/M Code No. 09-985-249-80T

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

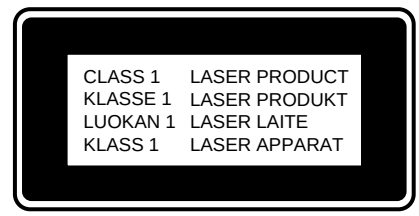
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

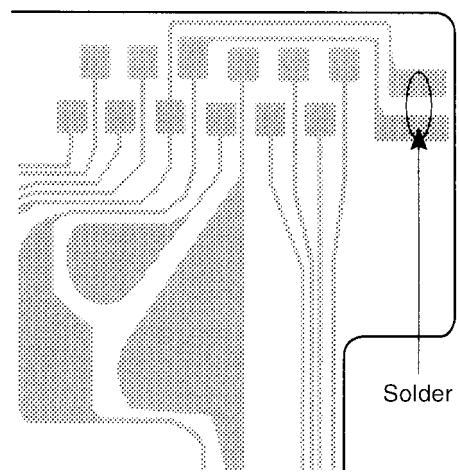


Precaution to replace Optical block (KSS-213F)

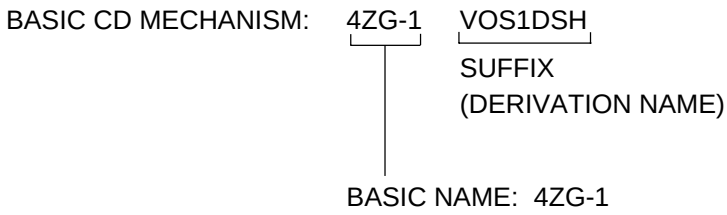
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



This is the SERVICE MANUAL for the BASIC CD MECHANISM of BASIC NAME: 4ZG-1. This BASIC NAME includes the following models as shown under the SUFFIX name: DERIVATION NAME. Please use this manual with the separate SERVICE MANUAL for DERIVATION NAME.



BASIC NAME	DERIVATION NAME							
4ZG-1	V	O	S1	D	SH	—	—	—

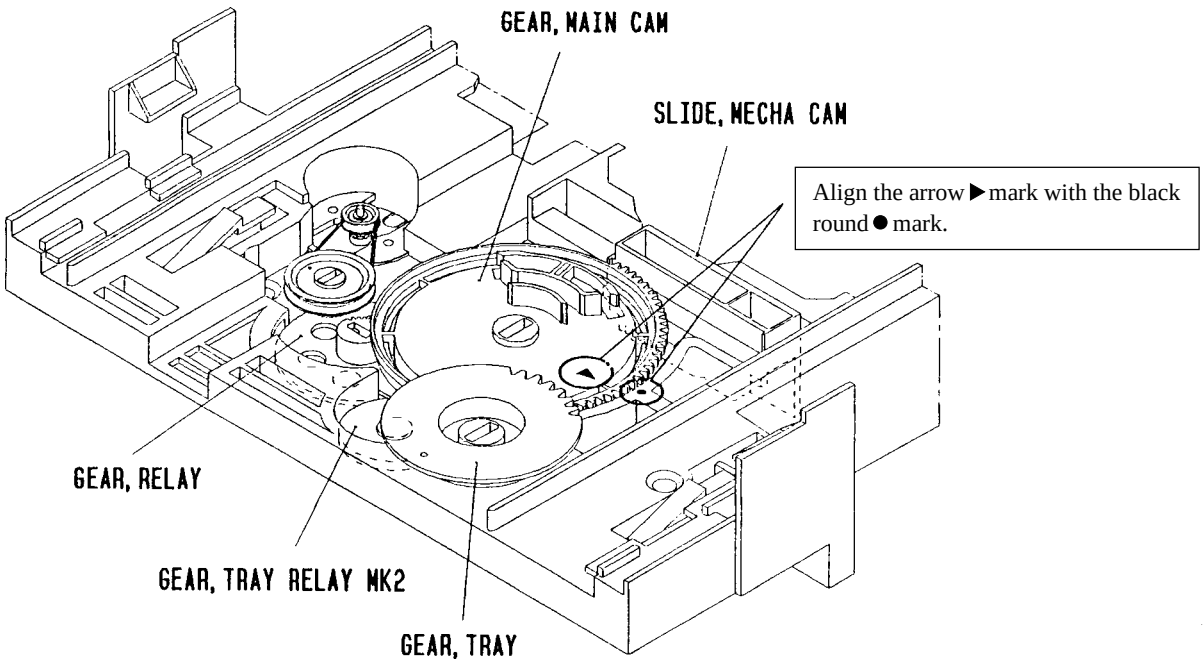
DERIVATION NAME

- V: VIDEO OUT
- O: On screen display
- S1: THE 1st SONY IC MODEL
- D: Digital output function
- SH: Pick up equipped with shutter

How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

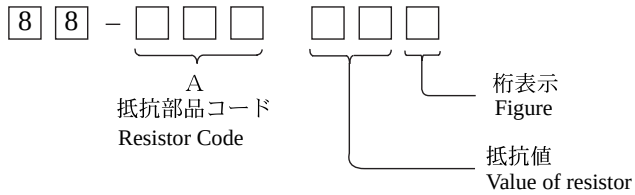
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-547-010		C-IC,CXA1992AR
	87-A20-919-040		C-IC,BA5915FP
	87-A20-917-010		C-IC,CXD2540Q-1/2
	84-ZG1-697-010		C-IC,UPD78016FGC-549
	87-017-825-010		IC,GP1F32T
	87-017-760-080		IC,M51943BML
	87-A20-602-040		C-IC,M5291FP
	87-A20-925-040		C-IC,BA05FP
	87-A20-905-040		C-IC,BA033FP
	87-001-873-010		IC,LB1644
	87-A20-920-010		C-IC,CL680-D1
	87-A20-921-040		C-IC,SN74LVU04APW
	87-A20-656-040		C-IC,MB81V4260S-60/70PFTN
	84-ZG1-695-040		C-IC,LH5V2RN1
	87-A20-975-040		C-IC,SN74LV74APW
	87-A20-974-040		C-IC,LC74781M-9017
	87-A20-918-040		C-IC,SM5878AM
TRANSISTOR			
	87-026-463-080		TR,2SA933S (0.3W)
	87-026-237-080		CHIP-TR,DTC124XK
	89-327-125-080		CHIP TR,2SC2712GR
	87-026-231-080		CHIP-TRANSISTER,DTA124XK
	87-A30-117-010		TR,2SA1357
	89-111-625-080		TR,2SA1162 (0.15W)
	87-026-580-080		C-TR,DTA123JK
	87-026-470-080		TR,HN1C03F (0.3W)
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
	87-017-024-040		C-DIODE,DA204K
	87-A40-180-040		C-DIODE,SB07-015C
	87-A40-384-080		C-ZENER,UDZ3.3B
3CD C.B			
C101	87-010-182-080		C-CAP,S 2200P-50 B
C102	87-016-669-080		C-CAP,S 0.1-25 K B
C103	87-016-669-080		C-CAP,S 0.1-25 K B
C104	87-016-669-080		C-CAP,S 0.1-25 K B
C105	87-010-404-040		CAP,E 4.7-50 SME
C106	87-016-369-080		C-CAP,S 0.033-25 B K
C107	87-010-197-080		CAP, CHIP 0.01 DM
C108	87-010-401-040		CAP,E 1-50 SME
C109	87-010-382-040		CAP,E 22-25 SME
C110	87-010-213-080		C-CAP,S 0.015-50 B
C111	87-010-263-040		CAP,E 100-10
C112	87-010-197-080		CAP, CHIP 0.01 DM
C113	87-016-369-080		C-CAP,S 0.033-25 B K
C114	87-016-369-080		C-CAP,S 0.033-25 B K
C115	87-016-369-080		C-CAP,S 0.033-25 B K
C116	87-012-158-080		C-CAP,S 390P-50 CH
C117	87-012-154-080		C-CAP,S 150P-50 CH
C118	87-010-494-040		CAP,E 1-50 GAS
C119	87-010-152-080		C-CAP,S 8P-50 CH
C120	87-010-992-080		C-CAP,S 0.047-25 B
C121	87-010-992-080		C-CAP,S 0.047-25 B
C123	87-016-669-080		C-CAP,S 0.1-25 K B
C125	87-010-198-080		CAP, CHIP 0.022
C126	87-016-669-080		C-CAP,S 0.1-25 K B
C127	87-010-555-040		CAP,E 100-10 GAS
C130	87-010-555-040		CAP,E 100-10 GAS
C131	87-010-555-040		CAP,E 100-10 GAS
C132	87-010-178-080		CHIP CAP 1000P
C133	87-010-555-040		CAP,E 100-10 GAS
C134	87-010-196-080		CHIP CAPACITOR,0.1-25
C135	87-010-196-080		CHIP CAPACITOR,0.1-25
C136	87-010-196-080		CHIP CAPACITOR,0.1-25
C137	87-010-196-080		CHIP CAPACITOR,0.1-25
C138	87-010-182-080		C-CAP,S 2200P-50 B
C139	87-010-197-080		CAP, CHIP 0.01 DM
C140	87-010-112-040		CAP,E 100-16
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C142	87-010-196-080		CHIP CAPACITOR,0.1-25
C143	87-010-213-080		C-CAP,S 0.015-50 B
C151	87-010-263-040		CAP,E 100-10
C152	87-010-197-080		CAP, CHIP 0.01 DM
C153	87-A10-893-040		CAP,E 220-10 M PW
C154	87-010-197-080		CAP, CHIP 0.01 DM
C155	87-010-184-080		CHIP CAPACITOR 3300P(K)
C156	87-010-992-080		C-CAP,S 0.047-25 B
C157	87-010-992-080		C-CAP,S 0.047-25 B
C158	87-012-156-080		C-CAP,S 220P-50 CH
C159	87-016-526-080		C-CAP,S 0.47-16 BK
C160	87-010-314-080		C-CAP,S 22P-50V
C161	87-010-182-080		C-CAP,S 2200P-50 B
C162	87-010-178-080		CHIP CAP 1000P
C201	87-016-669-080		C-CAP,S 0.1-25 K B
C204	87-010-197-080		CAP, CHIP 0.01 DM
C205	87-010-379-040		CAP,E 22-16 M SME
C206	87-010-322-080		C-CAP,S 100P-50 CH
C207	87-010-322-080		C-CAP,S 100P-50 CH
C208	87-010-322-080		C-CAP,S 100P-50 CH
C209	87-010-322-080		C-CAP,S 100P-50 CH
C210	87-016-669-080		C-CAP,S 0.1-25 K B
C211	87-010-263-040		CAP,E 100-10
C213	87-010-190-080		S CHIP F 0.01
C214	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-016-251-040		CAP,E 220-16 SMG
C302	87-012-140-080		CAP 470P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-384-040		CAP,E 100-25 SME
C305	87-010-982-040		CAP,E 33-25 GAS
C306	87-010-112-040		CAP,E 100-16
C307	87-010-196-080		CHIP CAPACITOR,0.1-25
C308	87-010-263-040		CAP,E 100-10
C309	87-010-196-080		CHIP CAPACITOR,0.1-25
C310	87-010-263-040		CAP,E 100-10
C311	87-010-196-080		CHIP CAPACITOR,0.1-25
C312	87-010-178-080		CHIP CAP 1000P
C320	87-010-196-080		CHIP CAPACITOR,0.1-25
C401	87-016-044-040		CAP,E 100-16 GAS
C402	87-010-190-080		S CHIP F 0.01
C403	87-010-190-080		S CHIP F 0.01
C501	87-010-197-080		CAP, CHIP 0.01 DM
C502	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-154-080		CAP CHIP 10P
C505	87-010-154-080		CAP CHIP 10P
C506	87-010-197-080		CAP, CHIP 0.01 DM
C508	87-010-263-040		CAP,E 100-10
C509	87-016-669-080		C-CAP,S 0.1-25 K B
C510	87-010-263-040		CAP,E 100-10
C511	87-016-669-080		C-CAP,S 0.1-25 K B
C512	87-010-197-080		CAP, CHIP 0.01 DM
C513	87-010-197-080		CAP, CHIP 0.01 DM
C514	87-010-197-080		CAP, CHIP 0.01 DM
C518	87-010-322-080		C-CAP,S 100P-50 CH
C519	87-012-145-080		CAP, CHIP S 270P CH
C520	87-012-157-080		C-CAP,S 330P-50 CH
C521	87-012-154-080		C-CAP,S 150P-50 CH
C522	87-010-371-080		CAP, ELECT 470-6.3V
C523	87-010-197-080		CAP, CHIP 0.01 DM
C524	87-010-197-080		CAP, CHIP 0.01 DM
C525	87-010-197-080		CAP, CHIP 0.01 DM
C526	87-010-197-080		CAP, CHIP 0.01 DM

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C527	87-010-197-080		CAP, CHIP 0.01 DM
C528	87-010-197-080		CAP, CHIP 0.01 DM
C529	87-010-197-080		CAP, CHIP 0.01 DM
C530	87-010-197-080		CAP, CHIP 0.01 DM
C531	87-010-197-080		CAP, CHIP 0.01 DM
C532	87-010-374-040		CAP,E 47-10
C533	87-010-197-080		CAP, CHIP 0.01 DM
C534	87-010-555-040		CAP,E 100-10 GAS
C535	87-010-197-080		CAP, CHIP 0.01 DM
C536	87-010-078-040		CAP,E 47-6.3 5L
C537	87-010-197-080		CAP, CHIP 0.01 DM
C538	87-010-196-080		CHIP CAPACITOR,0.1-25
C539	87-016-669-080		C-CAP,S 0.1-25 K B
C540	87-010-078-040		CAP,E 47-6.3 5L
C541	87-010-197-080		CAP, CHIP 0.01 DM
C542	87-010-318-080		C-CAP,S 47P-50 CH
C544	87-010-197-080		CAP, CHIP 0.01 DM
C546	87-010-197-080		CAP, CHIP 0.01 DM
C549	87-010-494-040		CAP,E 1-50 GAS
C550	87-010-196-080		CHIP CAPACITOR,0.1-25
C551	87-012-153-080		C-CAP,S 120P-50 CH
C552	87-016-526-080		C-CAP,S 0.47-16 BK
C554	87-010-197-080		CAP, CHIP 0.01 DM
C556	87-010-378-040		CAP,E 10-16
C557	87-010-316-080		C-CAP,S 33P-50 CH
C558	87-010-315-080		C-CAP,S 27P-50 CH
C560	87-010-197-080		CAP, CHIP 0.01 DM
C601	87-010-197-080		CAP, CHIP 0.01 DM
C602	87-010-197-080		CAP, CHIP 0.01 DM
C603	87-010-112-040		CAP,E 100-16
C604	87-010-196-080		CHIP CAPACITOR,0.1-25
C605	87-010-197-080		CAP, CHIP 0.01 DM
C606	87-010-197-080		CAP, CHIP 0.01 DM
C607	87-010-313-080		CAP, CHIP 18P
C608	87-010-313-080		CAP, CHIP 18P
C609	87-010-178-080		CHIP CAP 1000P
C610	87-010-178-080		CHIP CAP 1000P
C611	87-010-178-080		CHIP CAP 1000P
C612	87-010-178-080		CHIP CAP 1000P
C613	87-010-403-040		CAP,E 3.3-50 SME
C614	87-010-403-040		CAP,E 3.3-50 SME
C615	87-010-318-080		C-CAP,S 47P-50 CH
C616	87-010-318-080		C-CAP,S 47P-50 CH
CN101	87-A60-424-010		CONN,16P V TOC-B
CN102	87-099-199-010		CONN,6P 6216 H
CN401	87-099-212-010		CONN,5P 6216 V
CN403	87-099-030-010		CONN,13P 6216H
J501	87-009-502-010		JACK,PIN 1P Y EARTH
L101	87-005-196-080		COIL,10UH
L301	87-A50-095-010		COIL,68UH RCR875D
L302	87-005-426-080		COIL,3.3UH K FLR50
L502	87-005-204-080		COIL,47UH
L503	87-005-189-080		COIL 2.7UH
L504	87-005-187-080		COIL,1.8UH
L505	87-005-204-080		COIL,47UH
L506	87-005-204-080		COIL,47UH
L507	87-005-204-080		COIL,47UH
L508	87-005-817-080		C-COIL, 33UH J FLC32
M401	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
R130	87-022-364-080		C-RES,S 82K-1/10W F
R131	87-022-364-080		C-RES,S 82K-1/10W F
R132	87-022-364-080		C-RES,S 82K-1/10W F
R133	87-022-364-080		C-RES,S 82K-1/10W F
R134	87-022-364-080		C-RES,S 82K-1/10W F
R135	87-022-364-080		C-RES,S 82K-1/10W F
R507	87-A00-408-080		C-RES,S 2K-1/10W D
S201	87-A90-162-010		SW,SL 1-1-3 SSSU
S401	87-036-109-010		PUSH SWITCH
S402	87-036-109-010		PUSH SWITCH
W1	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N
W2	85-NFT-611-110		FF-CABLE 16P-1.0
W3	84-ZG1-630-010		CABLE FFC 6P-1.25
X201	87-A70-124-080		VIB,CER 8.0MHZ
X501	87-A70-125-080		VIB,XTAL 27MHZ 50PPM
X601	87-030-270-080		VIB,XTAL 16.9344MHZ
LED C.B			
LED401	87-070-200-080		LED,SLP636C-81-S-T1
LED402	87-017-350-080		LED,SEL1550CM
LED403	87-017-350-080		LED,SEL1550CM
LED404	87-070-200-080		LED,SLP636C-81-S-T1
T-T C.B			
C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
PS401	87-026-573-010		IC,GP1S53V
DRIVE C.B			
CN3	87-009-349-010		CONN,6P H WHT PH
M20	87-045-358-010		MOT,RF-310TA 43
M21	87-045-356-010		MOT,RF-310TA 30
SW1	87-A90-042-010		SW,LEAF MSW-17310MVPO
CD MOTOR C.B			
CN4	87-099-210-010		CONN,5P H BLK 6216
M1	87-045-305-010		MOT,RF-500TB
SW1	87-035-110-010		SW,MICRO SPPB62
SW2	87-035-110-010		SW,MICRO SPPB62

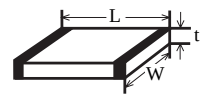
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○ チップ抵抗部品コード / CHIP RESISTOR PART CODE

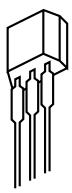
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



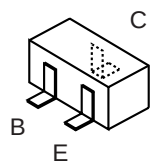
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Diamensions (mm)				抵抗コード　: A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

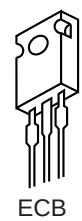
TRANSISTOR ILLUSTRATION



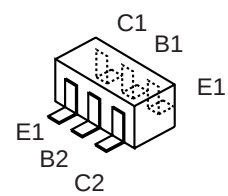
2SA933S



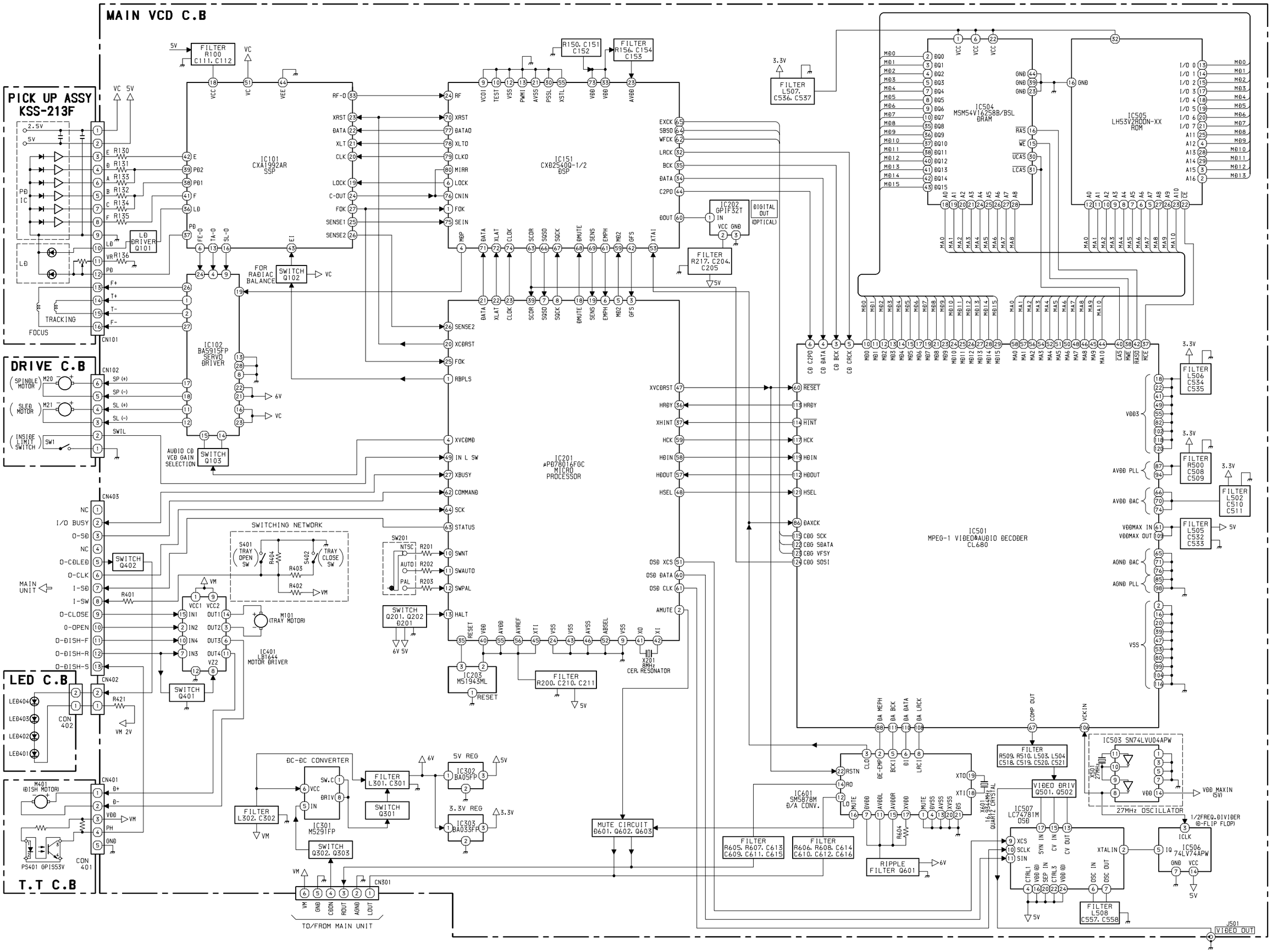
2SA1162
2SC2712
DTA123JK
DTA124XK
DTC124XK

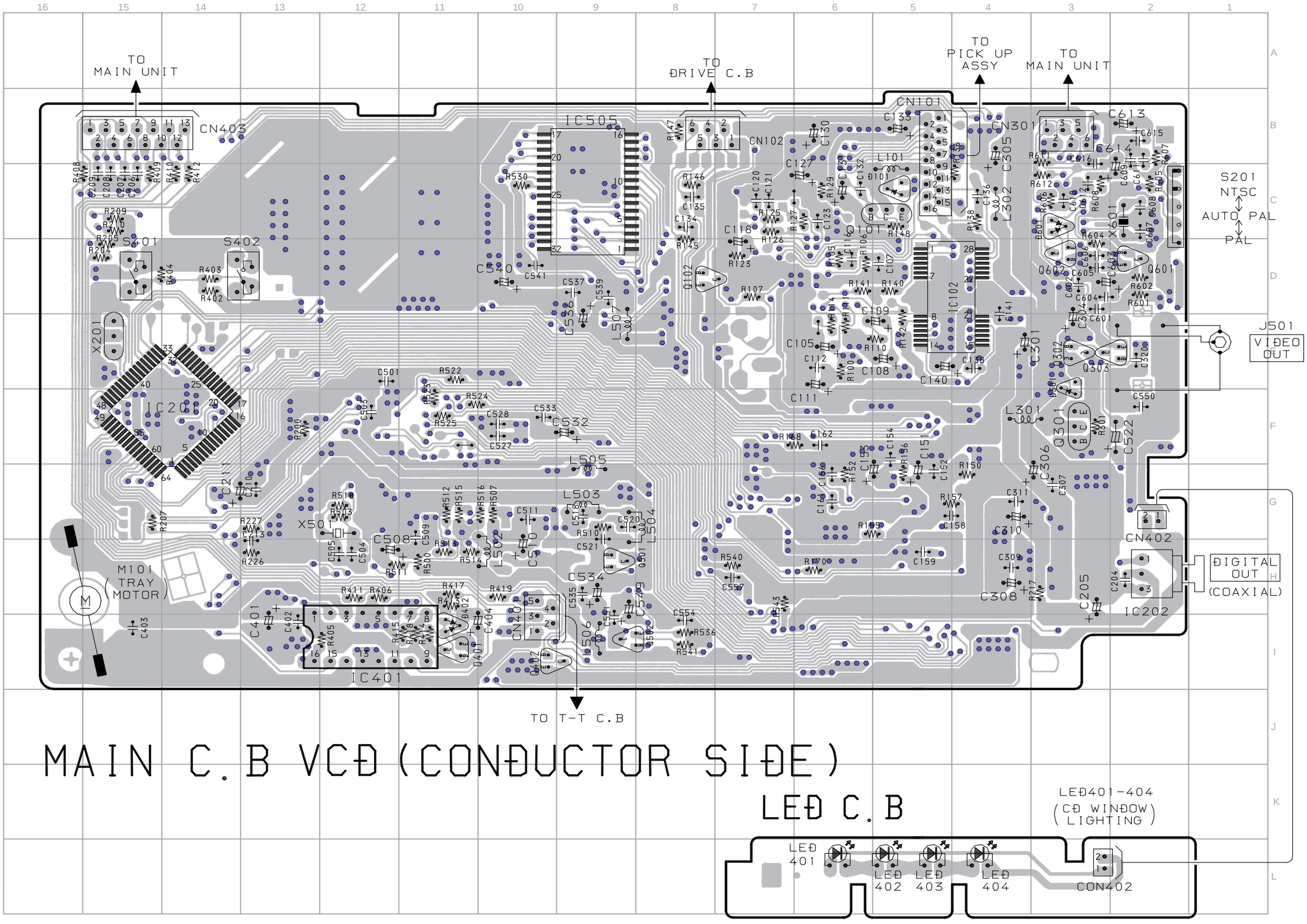


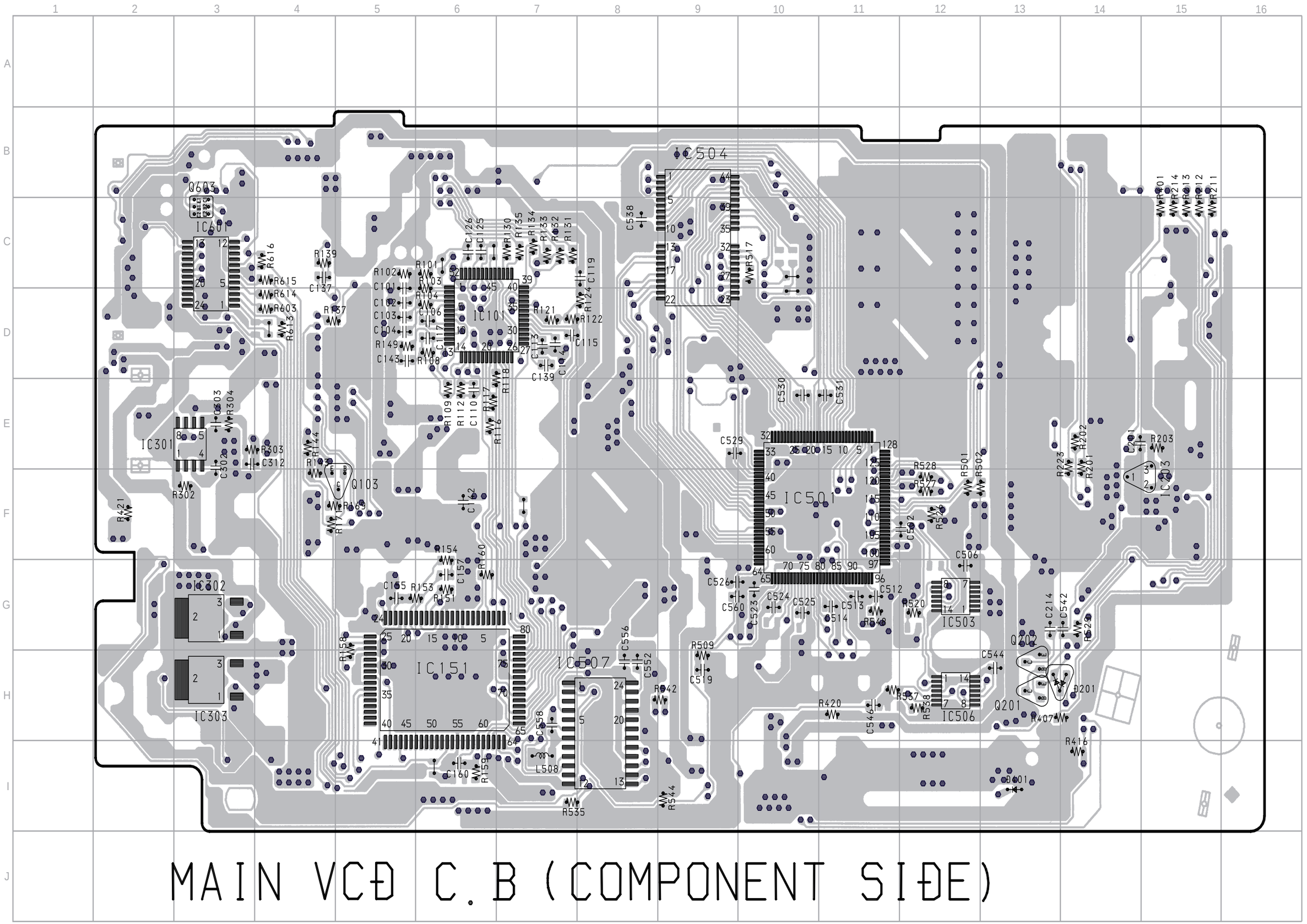
2SA1357

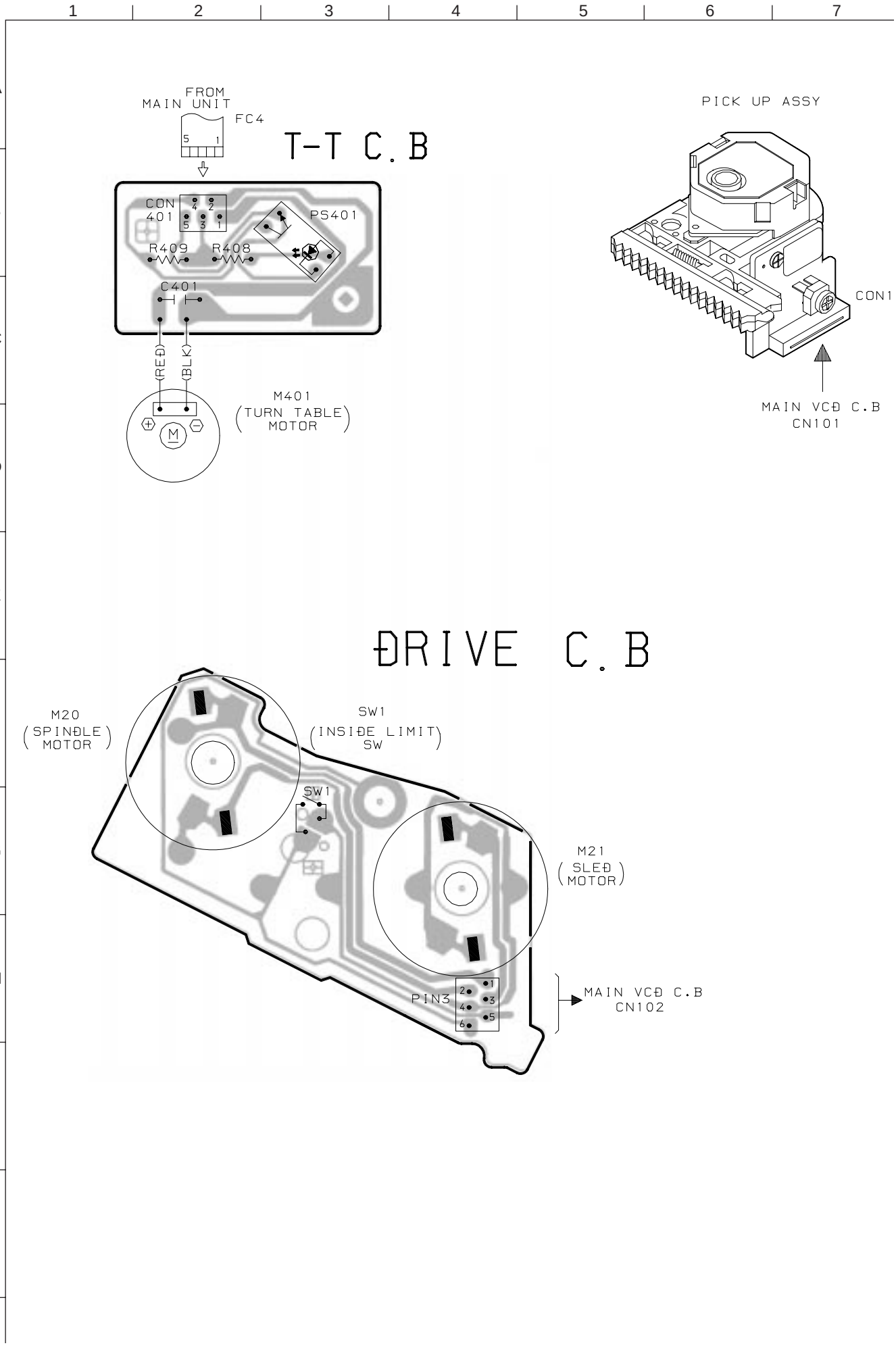


HN1C03F

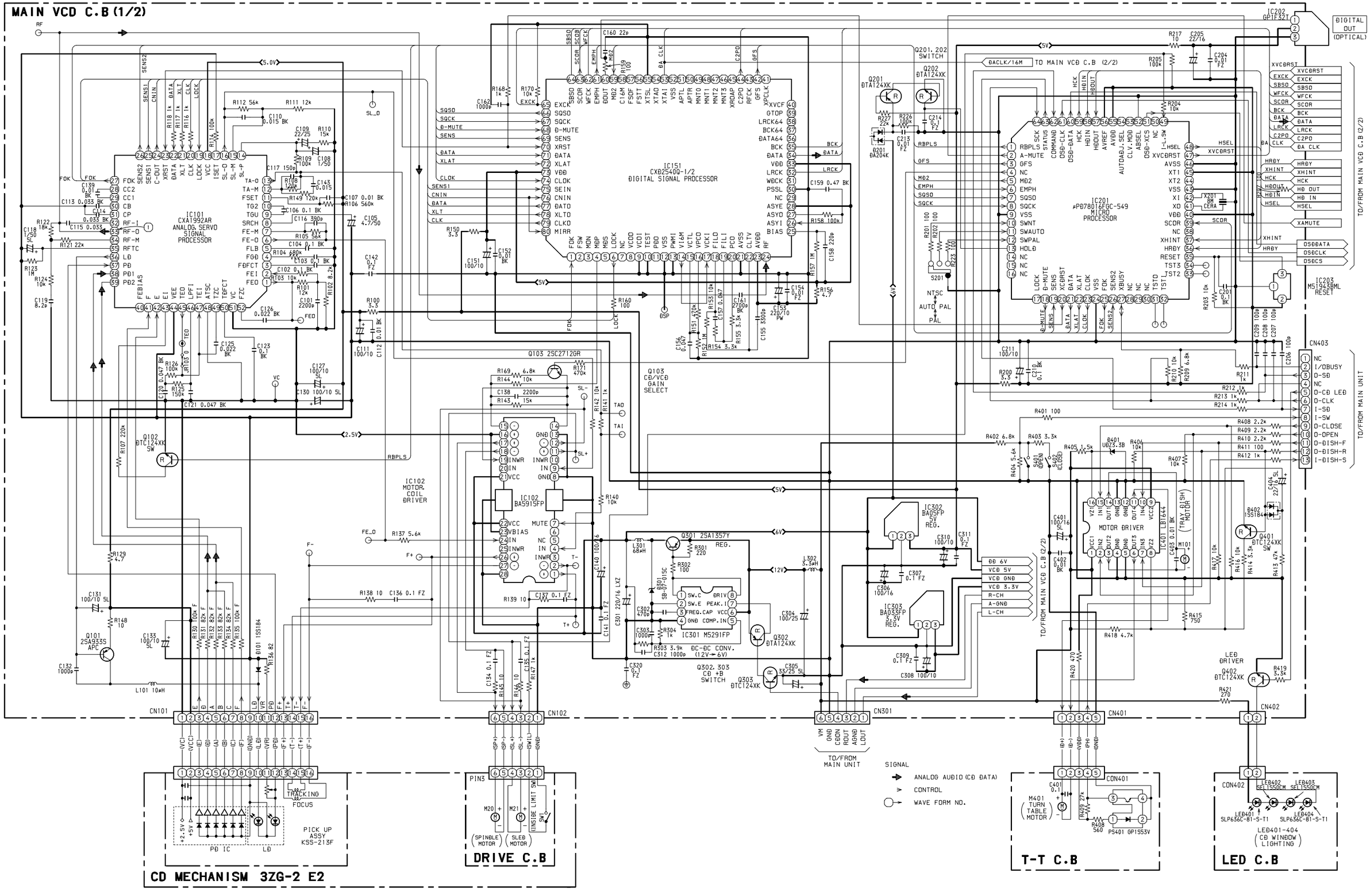

MAIN VCD C.B
PICK UP ASSY KSS-213F
DRIVE C.B
LED C.B
T.T C.B
IC101 CXA1992AR SSP
IC151 CXD25400-1/2 DSP
IC201 μPD78016FGC MICRO PROCESSOR
IC102 BA5915FP SERVO DRIVER
IC202 GPIF32T IN
IC504 MSM54V16258B/BSL DRAM
IC505 LH53V2ROON-XX ROM
IC501 MPEG-1 VIDEO&AUDIO DECODER CL680
IC601 SM5878M D/A CONV.
IC507 LC74781M OSD
IC506 74LV74APW
IC503 SN74LVU04APW
IC301 M5291FP
IC302 BA05FP
IC303 BA033FP
IC203 M51943ML
IC401 LB1644 MOTOR DRIVER
LD DRIVER Q101
SWITCH Q102
SWITCH Q103
SWITCH Q402
SWITCH Q401
SWITCH Q201, Q202 D201
SWITCH Q301
SWITCH Q302, Q303
MUTE CIRCUIT D601, Q602, Q603
RIPPLE FILTER Q601
VIDEO DRIV Q501, Q502
SWITCHING NETWORK
D/C-D/C CONVERTER
27MHz OSCILLATOR
DIGITAL OUT (OPTICAL)
TRACKING
FOCUS
TO/FROM MAIN UNIT
MAIN UNIT
J501 VIDEO OUT

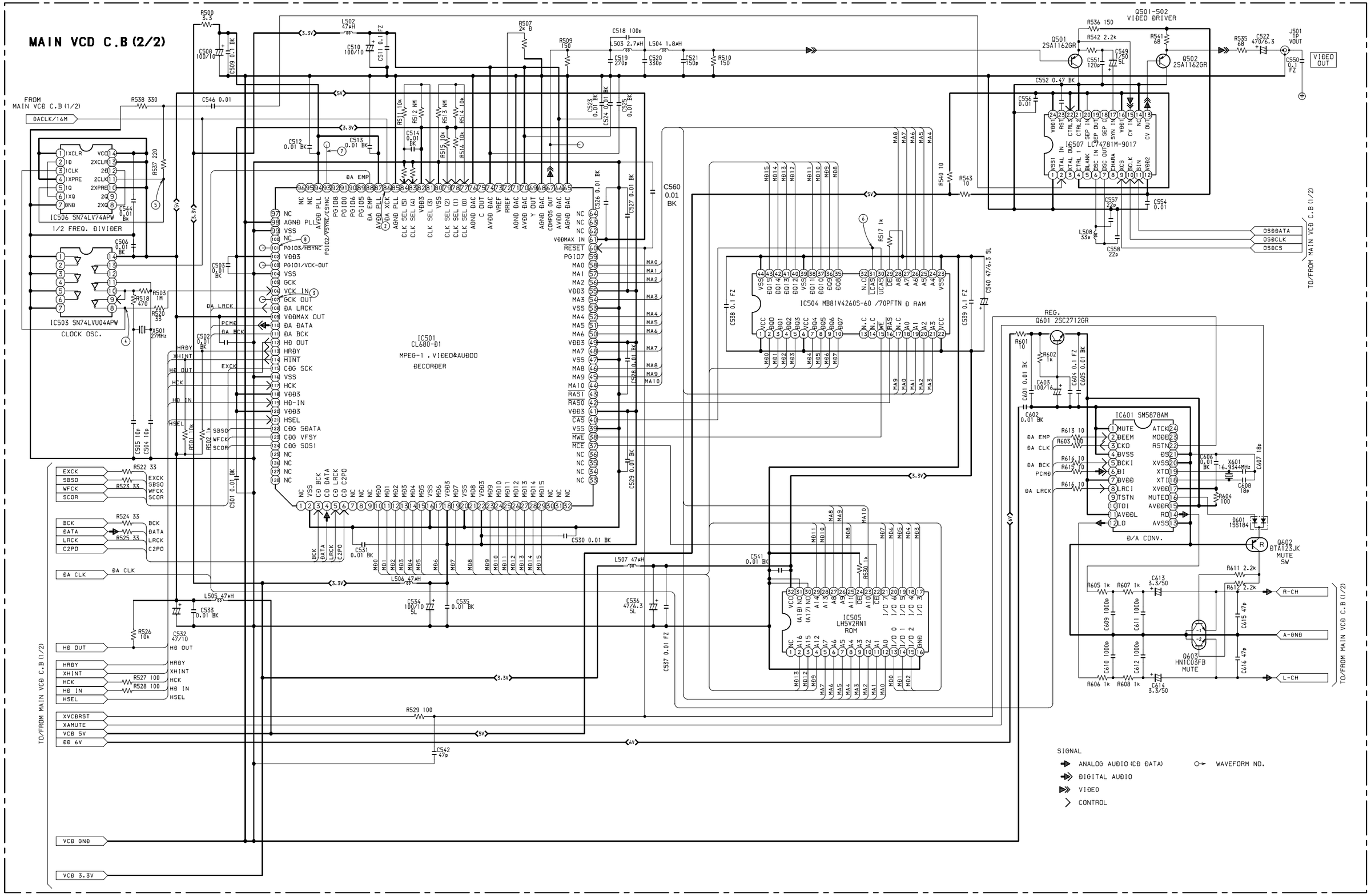

TO MAIN UNIT
TO ÐRIVE C.B
TO PICK UP ASSY
TO MAIN UNIT
CN403
IC505
CN102
CN101
CN301
S201 NTSC AUTO PAL PAL
S401
S402
X201
IC201
IC102
J501 VIÐEO OUT
X501
M101 TRAY MOTOR
IC401
CN402
ÐIGITAL OUT (COAXIAL)
IC202
TO T-T C.B
MAIN C.B VCÐ (CONÐUCTOR SIÐE)
LEÐ C.B
LEÐ401-404 (CÐ WINÐOW LIGHTING)
LEÐ 401
LEÐ 402
LEÐ 403
LEÐ 404
CON402


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J
IC504
IC501
IC101
IC151
IC607
IC301
IC302
IC303
IC503
IC506
IC203
Q603
Q103
Q202
Q201
D201
D601
MAIN VCD C.B (COMPONENT SIDE)


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
FROM
MAIN UNIT
FC4
5
1
T-T C.B
CON
401
4
2
5
3
1
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE)
MOTOR
M
PICK UP ASSY
CON1
MAIN VCD C.B
CN101
DRIVE C.B
M20
(SPINDLE)
MOTOR
SW1
(INSIDE LIMIT)
SW
SW1
M21
(SLED)
MOTOR
PIN3
2
1
4
3
6
5
MAIN VCD C.B
CN102

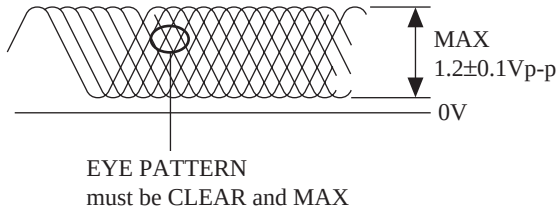
SCHEMATIC DIAGRAM-1




MAIN VCD C.B (2/2)
IC501 CL680-01 MPEG-1 . VIDEO&AUDIO DECORDER
IC504 MB81V4260S-60 /70PFTN D RAM
IC505 LH5V2AN1 ROM
IC506 SN74LV74APW 1/2 FREQ. DIVIDER
IC503 SN74LVU04APW CLOCK OSC.
IC507 LC74781M-9017
IC601 SM5878AM
Q501-502 VIDEO DRIVER
Q501 2SA1162GR
Q502 2SA1162GR
REG. Q601 2SC2712GR
Q602 DTA123JK MUTE SW
Q603 HN1C03FB MUTE
D/A CONV.
FROM MAIN VCD C.B (1/2)
TO/FROM MAIN VCD C.B (1/2)
VIDEO OUT
R-CH
A-GND
L-CH
SIGNAL
ANALOG AUDIO (CD DATA)
DIGITAL AUDIO
VIDEO
CONTROL
WAVEFORM NO.

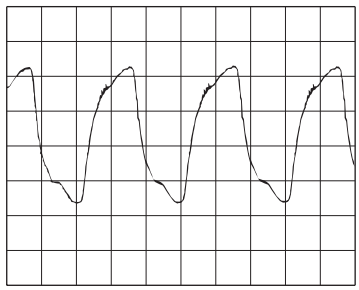
WAVE FORM

① IC101 Pin (33) (RF-O)
VOLT/DIV: 200mV
TIME/DIV: 0.5µS

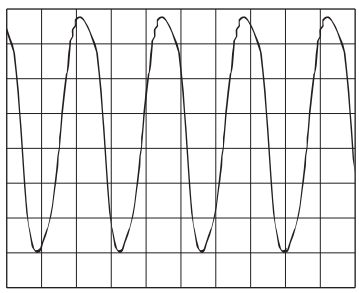


EYE PATTERN
must be CLEAR and MAX

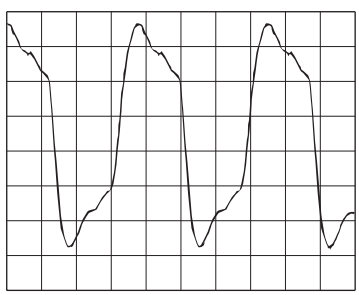
② IC501 Pin (86) DA XCK
16.93MHz
VOLT/DIV: 1V
TIME/DIV: 20nS



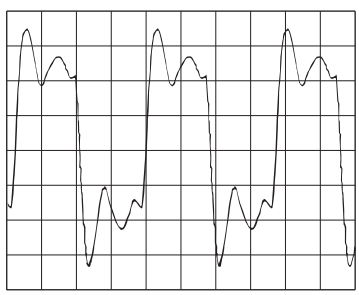
③ IC501 Pin (107) GCK OUT
42.3MHz
VOLT/DIV: 1V
TIME/DIV: 10nS



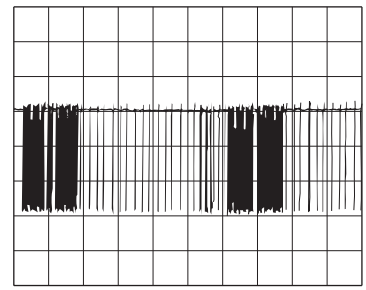
④ IC503 Pin (8) 33 VCK
27MHz±1.35kHz
VOLT/DIV: 1V
TIME/DIV: 10nS



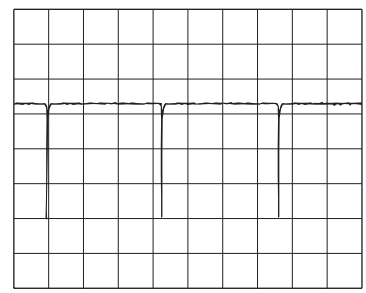
⑤ IC506 Pin (11) OSD CLK
13.5MHz±675Hz
VOLT/DIV: 1V
TIME/DIV: 20nS



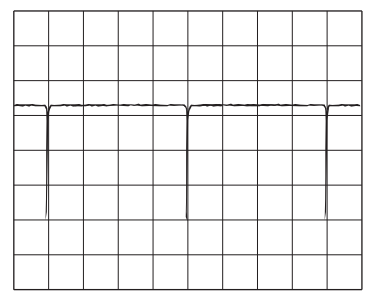
⑥ IC504 Pin (30) $\overline{\text{UCAS}}$
(Pin (31) $\overline{\text{LCAS}}$)
VOLT/DIV: 1V
TIME/DIV: 2µS



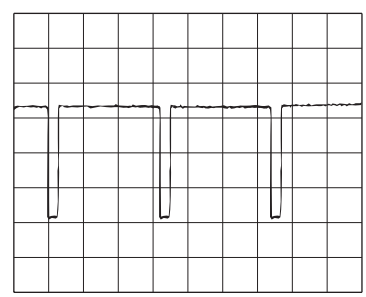
⑦ IC501 Pin (93) $\overline{\text{VSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 5mS



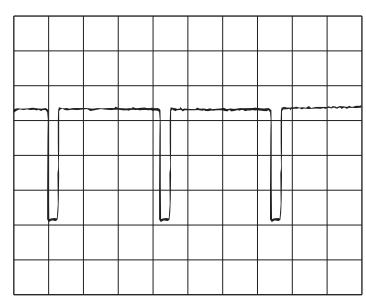
⑧ IC501 Pin (93) $\overline{\text{VSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 5mS



⑧ IC501 Pin (101) $\overline{\text{HSync}}$
PAL
VOLT/DIV: 1V
TIME/DIV: 20µS



IC501 Pin (101) $\overline{\text{HSync}}$
NTSC
VOLT/DIV: 1V
TIME/DIV: 20µS



IC DESCRIPTION

IC, CXA1992AR

Pin No.	Pin Name	I/O	Description
1	FEO	O	Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.
2	FEI	I	Input terminal for focus error.
3	FDFCT	I	Capacitor connection terminal for time constant used when there is defect.
4	FGD	I	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FE_O	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TA_M	I	Tracking amplifier inverted input pin.
13	TA_O	O	Tracking drive output.
14	SL_P	I	Sled amplifier non-inverted input pin.
15	SL_M	I	Sled amplifier inverted input pin.
16	SL_O	O	Sled drive output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input with external resistance connected.
18	Vcc	I	Power supply.
19	LOCK	I	“L” setting starts sled disorder-prevention circuit. (Not pull-up resistance)
20	CLK	I	Clock input for serial data transfer from CPU. (No pull-up resistance)
21	XLT	I	Latch input from CPU. (No pull-up resistance)
22	DATA	I	Serial data input from CPU. (No pull-up resistance)
23	XRST	I	Reset system at “L” setting. (No pull-up resistance)
24	C_OUT	O	Signal output for track number counting.
25	SENS1	O	FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.
26	SENS2	O	DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.
27	FOK	O	Output terminal for focus OK comparator.
28	CC2	I	Input pin where the DEFECT bottom hold output is capacitance coupled.
29	CC1	O	DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.
30	CB	I	Connection terminal for DEFECT bottom-hold capacitor.
31	CP	I	Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.

Pin No.	Pin Name	I/O	Description
32	RF_I	I	Input terminal by capacity combination of RF summing amplifier.
33	RF_O	O	Output terminal of RF summing amplifier. Checkpoint of Eye pattern.
34	RF_M	I	Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF_M and RFO terminals.
35	RFTC	I	This is a pin where the selection time constant is externally connected to control the RF level.
36	LD	O	APC amplifier output terminal.
37	PD	I	APC amplifier input terminal.
38, 39	PD1, PD2	I	RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.
40	FEBIAS	I/O	Bias adjustment pin of the focus error amplifier.
41, 42	F, E	I	F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.
43	EI	—	Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)
44	VEE	—	GND connection pin.
45	TEO	O	Output terminal for tacking-error amplifier. Output E-F signal.
46	LPFI	I	BAL adjustment comparator input pin. (Input through LPF from TEO)
47	TEI	I	Input terminal for tracking error.
48	ATSC	I	Window-comparator input terminal for detecting ATSC.
49	TZC	I	Input terminal for tracking-zero cross comparator.
50	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
51	VC	O	Output terminal for DC voltage reduced to half of VCC+VEE.
52	FZC	I	Input terminal for focus-zero cross comparator.

IC, CXD2540Q

Pin No.	Pin Name	I/O	Description
1	FOK	I	Focus OK input. Used for SENS output and the servo auto sequencer.
2	FSW	O	Spindle motor output filter switching output.
3	MON	O	Spindle motor on/off control output.
4	MDP	O	Spindle motor servo control.
5	MDS	O	
6	LOCK	O	High, when sampled value of GFS at 460Hz is high. Low, when sampled value of GFS at 460Hz is low by 8 times successively.
7	NC		
8	VCOO	O	Analog EFM PLL oscillation circuit output.
9	VCOI	I	Analog EFM PLL oscillation circuit input. fLOCK=8.6436MHz.
10	TEST	I	TEST pin.
11	PDO	O	Analog EFM PLL charge pump output.
12	VSS		GND.
13	PWMI	I	Spindle motor external control input.
14	V16M	O	VCO2 oscillation output for the wide-band EFM PLL.
15	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL.
16	VPCO	O	Wide-band EFM PLL charge pump output.
17	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL.
18	FILO	O	Multiplier PLL (slave=digital PLL) filter output.
19	FILI	I	Multiplier PLL filter input.
20	PCO	O	Multiplier PLL charge pump output.
21	AVSS		Analog GND.
22	CLTV	I	Multiplier VCO1 control voltage input.
23	AVDD		Analog power supply (5V).
24	RF	I	EFM signal input.
25	BIAS	I	Constant current input of the asymmetry circuit.
26	ASYI	I	Asymmetry comparator voltage input.
27	ASYO	O	EFM full-swing output.
28	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on.
29	NC		
30	PSSL	I	Audio data output mode switching input. Low: serial output; high: parallel output.
31	WDCK	O	D/A interface for 48-bit slot. Word clock f=2Fs.
32	LRCK	O	D/A interface for 48-bit slot. LR clock f=Fs.
33	VDD		Power supply (5V).
34	DA16	O	DA16 (MSB) output when PSSL=1. 48-bit slot serial data (two’s complement, MSB first) when PSSL=0.
35	DA15	O	DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.
36	DA14	O	DA14 output when PSSL=1. 64-bit slot serial data (two’s complement, LSB first) when PSSL=0.
37	DA13	O	DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.
38	DA12	O	DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.

Pin No.	Pin Name	I/O	Description
39	DA11	O	DA11 output when PSSL=1. GTOP output when PSSL=0.
40	DA10	O	DA10 output when PSSL=1. XUGF output when PSSL=0.
41	DA09	O	DA09 output when PSSL=1. XPLCK output when PSSL=0.
42	DA08	O	DA08 output when PSSL=1. GFS output when PSSL=0.
43	DA07	O	DA07 output when PSSL=1. RFCK output when PSSL=0.
44	DA06	O	DA06 output when PSSL=1. C2PO output when PSSL=0.
45	DA05	O	DA05 output when PSSL=1. XRAOF output when PSSL=0.
46	DA04	O	DA04 output when PSSL=1. MNT3 output when PSSL=0.
47	DA03	O	DA03 output when PSSL=1. MNT2 output when PSSL=0.
48	DA02	O	DA02 output when PSSL=1. MNT1 output when PSSL=0.
49	DA01	O	DA01 output when PSSL=1. MNT0 output when PSSL=0.
50	APTR	O	Aperture compensation control output. This pin outputs a high signal when the right channel is used.
51	APTL	O	Aperture compensation control output. This pin outputs a high signal when the left channel is used.
52	VSS		GND.
53	XTAI	I	Crystal oscillation circuit input.
54	XTAO	O	Crystal oscillation circuit output.
55	XTSL	I	Crystal selector input.
56	FSTT	O	2/3 frequency divider output for Pins 53 and 54.
57	FSOF	O	1/4 frequency divider output for Pins 53 and 54.
58	C16M	O	16.9344MHz output. (V16M output in CLV-W and CAV-W modes)
59	MD2	I	Digital-out on/off control. High: on; low: off
60	DOUT	O	Digital-out output.
61	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
62	WFCK	I	WFCK (write frame clock) output.
63	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected.
64	SBSO	O	Sub P to W serial output.
65	EXCK	I	SBSO readout clock input.
66	SQSO	O	Sub Q 80-bit and PCM peak, level metter and internal status outputs.
67	SQCK	I	SQSO readout clock input.
68	MUTE	I	High: mute; low: release
69	SENS	—	SENS output to CPU.
70	XRST	I	System reset. Reset when low.
71	DATA	O	Serial data input from CPU.
72	XLAT	O	Latch input from CPU. Serial data is latched at the falling edge.
73	VDD		Power supply (5V).
74	CLOK	O	Serial data transfer clock input from CPU.
75	SEIN	I	SENS input from SSP.
76	CNIN	I	Track jump count signal input.

Pin No.	Pin Name	I/O	Description
77	DATO	O	Serial data output to SSP.
78	XLTO	O	Serial data latch output to SSP. Latched at the falling edge.
79	CLKO	O	Serial data transfer clock output to SSP.
80	MIRR	I	Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer.

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μ.
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the ±28F jitter margin.

IC, CL680

Pin No.	Pin Name	I/O	Description
1	NC	—	No connection.
2	VSS	—	GND.
3	CD BCK	I	Bit clock input from CD DSP.
4	CD DATA	I	Data input from CD DSP.
5	CD LRCK	I	LRCK input from CD DSP.
6	CD C2PO	I	C2 pointer input from CD DSP.
7-9	NC	—	No connection.
10-15	MD0-MD5	I/O	DRAM/ROM interface. (DATA)
16	VSS	—	Ground.
17	MD6	I/O	DRAM/ROM interface. (DATA)
18	VDD3	—	Power supply 3.3V.
19	MD7	I/O	DRAM/ROM interface. (DATA)
20	VSS	—	Ground.
21	MD8	I/O	DRAM/ROM interface. (DATA)
22	VDD3	—	Power supply 3.3V.
23-29	MD9-MD15	I/O	DRAM/ROM interface. (DATA)
30-36	NC	—	No connection.
37	$\overline{\text{MCE}}$	—	ROM chip enable.
38	$\overline{\text{MWE}}$	O	DRAM write enable.
39	VSS	—	Ground.
40	$\overline{\text{CAS}}$	O	DRAM/ROM interface.
41	VDD3	—	Power supply 3.3V.
42	$\overline{\text{RASO}}$	O	DRAM/ROM interface.
43	$\overline{\text{RASI}}$	O	
44-46	MA10-MA8	O	DRAM/ROM interface. (Address)
47	VSS	—	Ground.
48	MA7	O	DRAM/ROM interface. (Address)
49	VDD3	—	Power supply 3.3V.
50-52	MA6-MA4	O	DRAM/ROM interface. (Address)
53	VSS	—	Ground.
54	MA3	O	DRAM/ROM interface. (Address)
55	VDD3	—	Power supply 3.3V.
56-58	MA2-MA0	O	DRAM/ROM interface. (Address)
59	PGIO7	I/O	Programmable I/O.
60	$\overline{\text{RESET}}$	I	Reset input.
61	VDD MAX IN	—	Power supply - VDDMAX. (5.0V)
62-64	NC	—	No connection.
65	AGND DAC	—	Analog ground.
66	A DAC	—	Analog power supply (DAC) : 3.3V.
67	COMP OUT	O	Composite out.
68	AGND DAC	—	Analog ground.

Pin No.	Pin Name	I/O	Description
69	Y OUT	O	Video signal “Y” OUT.
70	AVDD DAC	—	Analog power supply (DAC) 3.3V.
71	AGND DAC	—	Analog ground.
72	R REF	I	Reference resistor input.
73	V REF	I	Voltage reference input.
74	AVDD DAC	—	Analog power supply (DAC) : 3.3V.
75	C OUT	O	Video signal “C” out.
76	AGND DAC	—	Analog ground.
77-79	CLK SEL0-2	I	Clock selection input.
80	VSS	—	Ground.
81	CLK SEL3	I	Clock selection input.
82	VDD3	—	Power supply 3.3V.
83, 84	CLK SEL4, 5	I	Clock selection input.
85	AGND PLL	—	Analog ground.
86	DA XCK	I	DA XCK (16.933MHz) input.
87	AVDD PLL	—	Analog power supply 3.3V.
88	DA EMP	O	DAC-emphasis output.
89, 90	PGIO5, O6	I/O	Programmable I/O.
91	PGIO0	I/O	
92	PGIO8	I/O	
93	$\overline{\text{VSYNC/CSYNC}}$	O	$\overline{\text{VSYNC/CSYNC}}$ output.
94	AVDD PLL	—	Analog power supply (PLL) 3.3V.
95	VID_DAC_CK	O	Video DAC clock.
96	PROC_CK	O	Processor clock.
97	AUD_XCK	O	Audio XCK.
98	AGND PLL	—	Analog ground.
99	VSS	—	Ground.
100	NC	—	No connection.
101	$\overline{\text{HSYNC}}$	O	$\overline{\text{HSYNC}}$ output.
102	VDD3	—	Power supply 3.3V.
103	VCK OUT	O	VCK out.
104	VSS	—	Ground.
105	GCK	I	Global clock signal input. (42.3MHz)
106	VCK	I	Video clock signal input. (27.0MHz)
107	GCK OUT	O	Global clock signal output. (27.0MHz)
108	DA LRCK	O	DAC-LRCK output.
109	VDD MAX OUT	—	Power supply (VDD MAX) : 5.0V.
110	DA DATA	O	DAC-PCM data output.
111	DA BCK	O	DAC-BIT clock output.
112	HD OUT	O	Micon interface. (Data out)
113	HRDY	O	Micon interface. (Host ready)

Pin No.	Pin Name	I/O	Description
114	$\overline{\text{HINT}}$	O	Micon interface. (Host interrupt)
115	CDG SCK	I	CD-G serial clock input.
116	VSS	—	Ground.
117	HCK	I	Micon interface. (Host clock)
118	VDD3	—	Power supply 3.3V.
119	HD IN	I	Micon interface. (Host data in)
120	VDD3	—	Power supply 3.3V.
121	HSEL	I	Micon interface. (Host select in)
122	CDG DATA	I	CD-G data input.
123	CDG VFSY	I	CD-G VFSY input.
124	CDG SOSI	I	CD-G SOSI input.
125	DSP-XCK	O	DSP-XCK output.
126-128	NC	—	No connection.

IC, LC74781M

Pin No.	Pin Name	I/O	Description
1	VSS1	—	GND connection terminal. (Digital ground terminal).
2	Xtal IN	I	External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).
3	Xtal OUT	O	
4	CTRL1	I	Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.
5	BLANK	O	Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ($\overline{RST}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).
6	OSC IN	I	External coil and capacitor for the character output dot clock generator are connected to this terminal.
7	OSC OUT	O	
8	CHARA	O	The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ($\overline{RST}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command).
9	$\overline{CS}$	I	Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).
10	SCLK	I	Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).
11	SIN	I	Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).
12	VDD2	—	Power supply for the composite video signal level adjustment. (Analog power supply).
13	CV OUT	O	Composite video signal output terminal.
14	NC	—	Connected to GND or not connected.
15	CV IN	I	Composite video signal input terminal.
16	VDD1	—	Power supply (+5V digital power supply).
17	SYN IN	I	Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).
18	SEP C	—	Internal sync separator circuit bias voltage monitoring terminal.
19	SEP OUT	O	The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).
20	SEP IN	I	The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.
21	CTRL2	I	When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.

Pin No.	Pin Name	I/O	Description
22	CTRL3	I	Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.
23	$\overline{\text{RST}}$	I	System reset input terminal. Pull-up resistor is built-in. (Hysteresis input).
24	VDD1	—	Power supply. (+5V digital power supply).

IC, µPD78016FGC

Pin No.	Pin Name	I/O	Description
1	RBPLS	O	RADIAL BALANCE PLUS.
2	AMUTE	O	AUDIO ANALOG MUTE (H=MUTE ON).
3	GFS	I	GFS.
4	XVCDMD	I	AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP).
5	MD2	O	DOUT MUTE CONT.
6	EMPH	I	EMPHASIS.
7	SQSO	I	SQDATA FROM CD.
8	SQCK	O	SQCLK TO CD.
9	VSS	—	GND.
10	SWNT	I	SW TV OUT MODE (L=NTSC).
11	SWAUTO	I	SW TV OUT MODE (L=NTSC/PAL AUTO).
12	SWPAL	I	SW TV OUT MODE (L=PAL).
13	EMERG	I	POWER EMERGENCY STOP (L*3sec=STOP).
14	NC	—	Nou used.
15	LPCSEL	I	“LPC ON/OFF (H=ON, NORMAL)”.
16	NC	—	Nou used.
17	LOCK	O	GFS (FRAME SYNC) LOCK (NO USE=H).
18	DMUTE	O	DIGITAL DATA OUT MUTE.
19	SENS	I	DSP SENS1 FROM CD.
20	XCDRST	O	CD RESET.
21	DATA	O	DATA TO CD.
22	XLAT	O	XLT TO CD.
23	CLOK	O	CLK TO CD.
24	VSS	—	GND.
25	FOK	I	FOCUS OK.
26	SENS2	I	SSP SENS2 FROM CD.
27	XBUSY	I/O	READY/BUSY I/O TO HOST OD.
28	NC	—	Nou used.
29	NC	—	
30	NC	—	
31	TST0	I/O	CHECK LAND.
32	TST1	I/O	
33	TST2	I/O	
34	TST3	I/O	
35	RESET	I	RESET.
36	HRDY	I	HRDY FROM CL680.
37	XHINT	I	HINT FROM CL680.
38	NC	—	Nou used.
39	SCOR	I	SCOR FROM CD.
40	VDD	—	5.0VDD.
41	XO	O	8.0MHz CERALOCK.

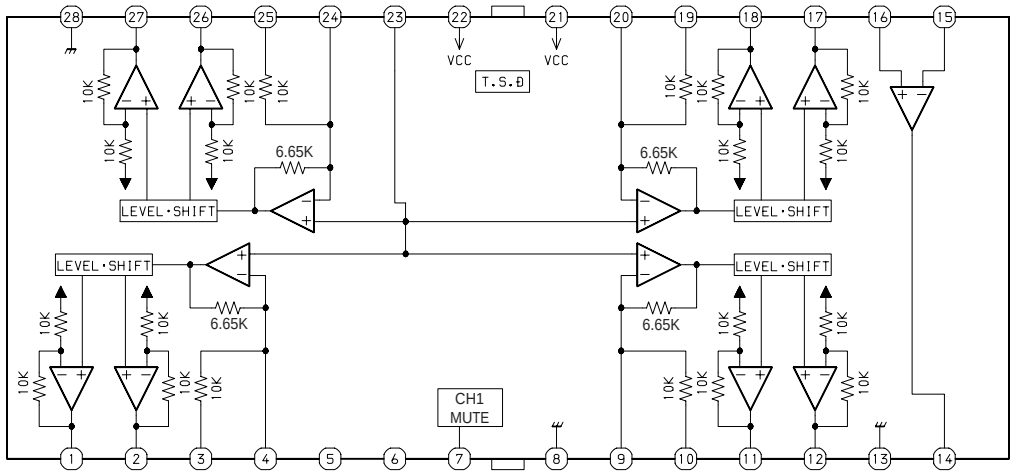
Pin No.	Pin Name	I/O	Description
42	XI	I	8.0MHz CERALOCK.
43	VSS	—	GND.
44	XT2	—	Nou used.
45	XT1	I	5.0VDD.
46	AVSS	—	GND.
47	XMPGRST	O	MPEG BLOCK IC RESET.
48	HSEL	O	ADDRESS/DATA SEL TO CL680.
49	INLSW	I	INSIDE LIMIT SW .
50	NC	—	Nou used.
51	OSDXCS	O	OSD CHIP SELECT.
52	ABSEL	I	CXA1992A/B SELECT (L=CXA1992A).
53	CLVSEL	I	CLV MODE SELECT (H=CLV-N).
54	AADSEL	I	AUTO ADJUST SELECT (H=AUTO ON).
55	AVDD	—	5.0VDD.
56	AVREF	—	
57	HDOUT	I	HD-OUT FROM CL680.
58	HDIN	O	HD-IN TO CL680.
59	HCK	O	HCK TO CL680.
60	OSDDATA	O	OSD DATA.
61	OSDCLK	O	OSD CLOCK.
62	COMMAND	I	COMMAND FROM HOST.
63	STATUS	O	STATUS TO HOST.
64	SCK	I	SCK FROM HOST.

IC, SM5878M

Pin No.	Pin Name	I/O	Description
1	MUTE	I	MODE = H: Soft mute ON/OFF terminal. (Mute at H). MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H).
2	DEEM	I	De-emphasis ON/OFF terminal. (De-emphasis ON at H).
3	CKO	O	Oscillator clock output. (16.9344 MHz).
4	DVSS	—	Digital VSS terminal.
5	BCKI	I	Bit clock input terminal.
6	DI	I	Serial data input terminal.
7	DVDD	—	Digital VDD terminal.
8	LRCI	I	Sample rate clock (fs) input terminal. (H = L ch/L = R ch).
9	TSTN	I	Test input. (“H” or open during normal operation)
10	TO1	O	Test output 1. (Normally low level output).
11	AVDDL	—	Analog VDD terminal. (For L ch).
12	LO	O	Left channel analog output terminal.
13	AVSS	—	Analog VSS terminal.
14	RO	O	Right channel analog output terminal.
15	AVDDR	—	Analog VDD terminal. (For R ch).
16	MUTEO	O	Infinity zero detection output.
17	XVDD	—	X’tal system VDD terminal.
18	XTI	I	X’tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).
19	XTO	O	X’tal oscillator terminal.
20	XVSS	—	X’tal system VSS terminal.
21	DS	I	Double-speed/normal playback selection. (Double-speed at H).
22	RSTN	I	Reset terminal. (Reset at L).
23	MODE	I	Soft mute/Attenuator mode selection. (Soft mute at H).
24	ATCK	I	Attenuator level setup clock (Ignored when MODE = H).

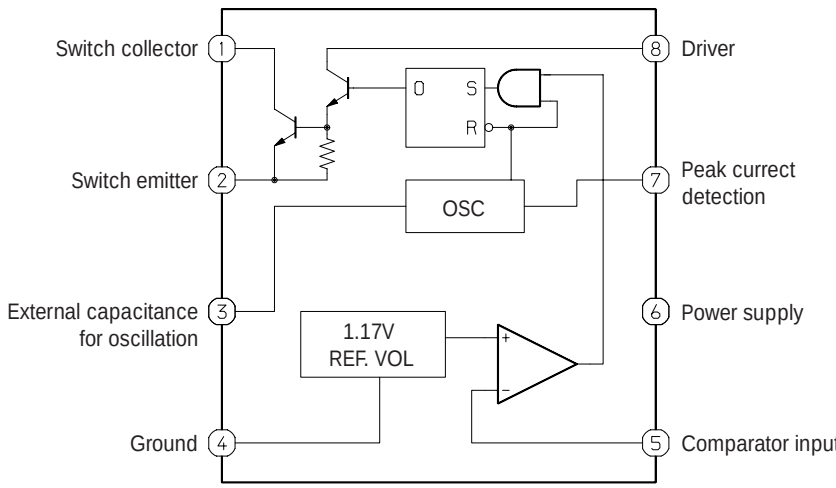
IC BLOCK DIAGRAM

IC, BA5915FP

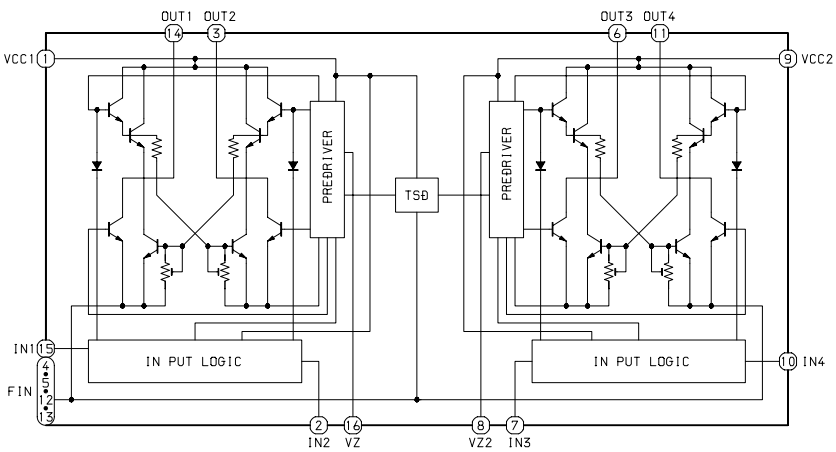


T.S.D: Thermal shut-down
Resistors are in units of Ω.

IC, M5291FP



IC, LB1644



TRUH TABLE

IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
0	0	L	L	0	0	L	L
1	0	H	L	1	0	H	L
0	1	L	H	0	1	L	H
1	1	L	L	1	1	L	L

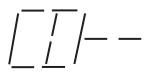
INPUT			OUTPUT				MODE	
IN1	IN2.3	IN4	OUT1	OUT2	OUT3	OUT4	M1	M2
0	0	0	L	L	L	L	BRAKE	BRAKE
1	0	0	H	L	L	L	FF/REW	BRAKE
0	1	1	L	H	L	L	REW/FF	BRAKE
1	1	0	L	L	H	L	BRAKE	FF/REW
0	0	1	L	L	L	H	BRAKE	REW/FF
1	1	1	L	L	L	L	BRAKE	BRAKE

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the function CD button.
   All FL display tubes will light up, and the test mode will be activated.

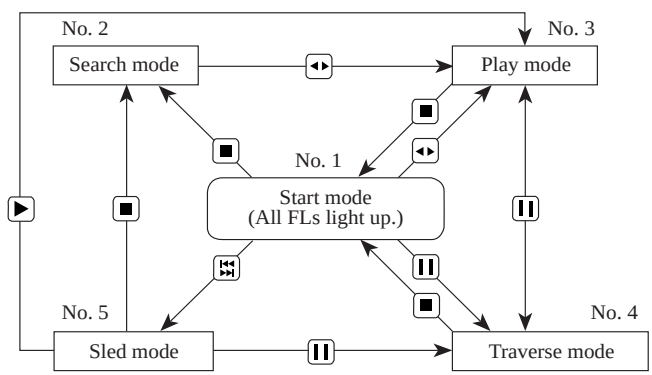
2. How to Cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   - Press the function button. (except CD function button)
   - Press the power switch button.
   - Disconnect the AC plug

3. CD Test Mode Functions
   When test mode is activated, the following mode functions from No.1 to No.5 can be used by pressing the operation keys.

Mode/No.	Operation	FL display	Operation	Contents
Start mode No.1	Activation	TEST□□ □□ □□ Flashes repeatdly	• Test mode is activated. • CD block power is ON.	• Test mode
Search mode No.2	■ key		• Continual focus search (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes. * NOTE 1	FOCUS SERVO • Check focus search waveform • Check focus error waveform (FOK/FZC are not monitored in the search mode)
Play mode No.3	◀▶ key		• Normal playback • Focus search is continued if TOC cannot be read. * NOTE 1	FOCUS SERVO/TRACKING SERVO CLV SERVO/SLED SERVO Check FOK/FZC
Traverse mode No.4	⏸ key		• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON/OFF Tracking balance (traverse) check
Sled mode No.5	⏮ key ⏭	All lamps light	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

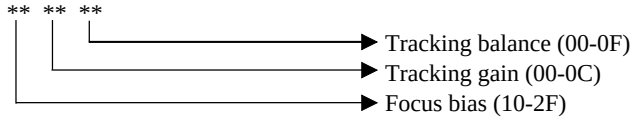
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ⏸ status is active. If they are pressed, playback will not be possible after the ⏸ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ⏸ status, press the ■ key and return to the start mode (No.1).
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.



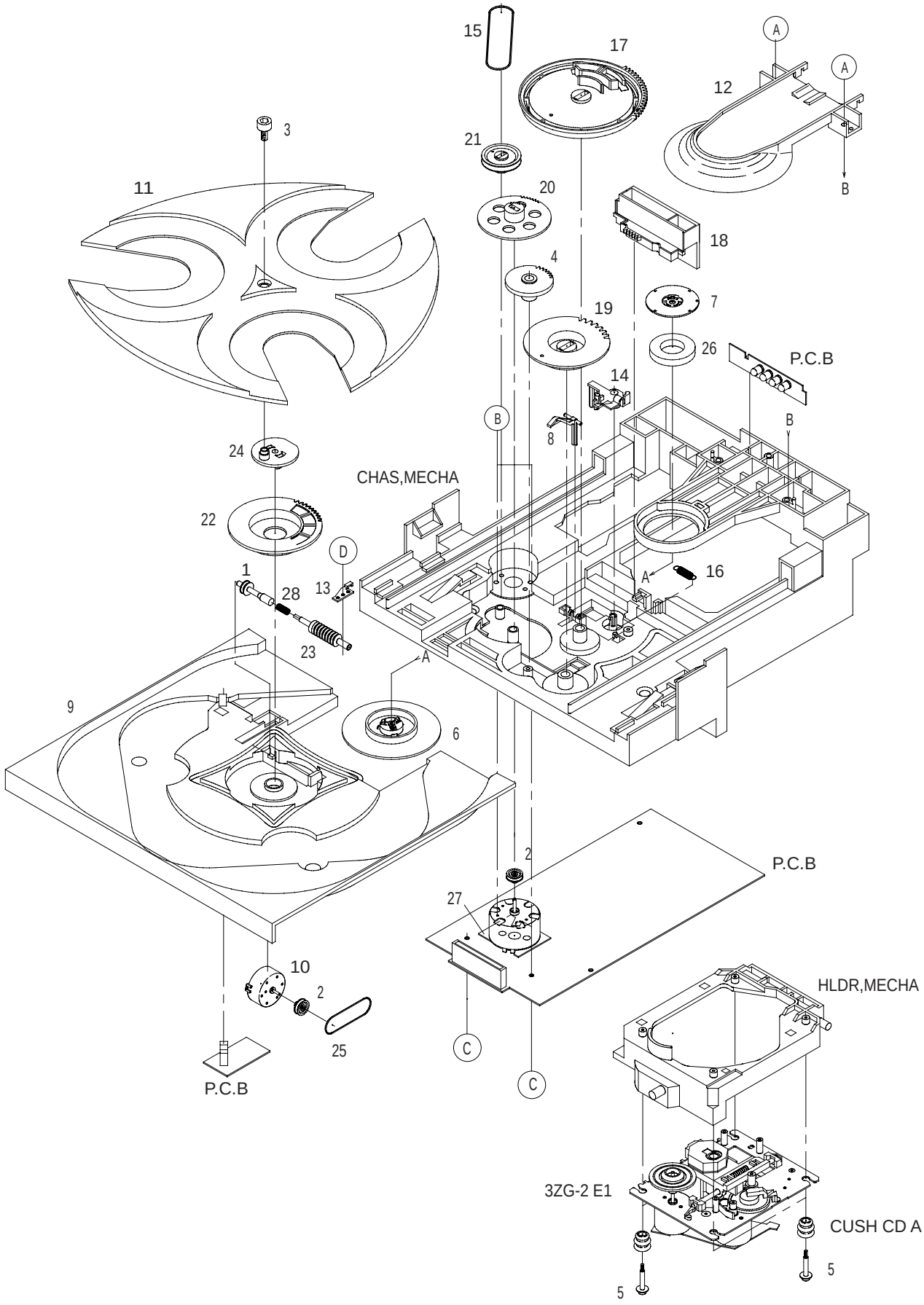
   If the DISC DIRECT PLAY button is pressed, the machine performs the same operation as the PLAY button is pressed as shown. If the tray is opened by pressing OPEN/CLOSE button during Play mode or Traverse mode, the machine returns to the Start mode.

5. How to check the Automatic Adjustment Values
   The automatic adjustment values can be checked by pressing the square (■) button.
   FL display (displayed in hexadecimal values)



Note) The reference value is “20 08 08”.

MECHANICAL EXPLODED VIEW 1/1

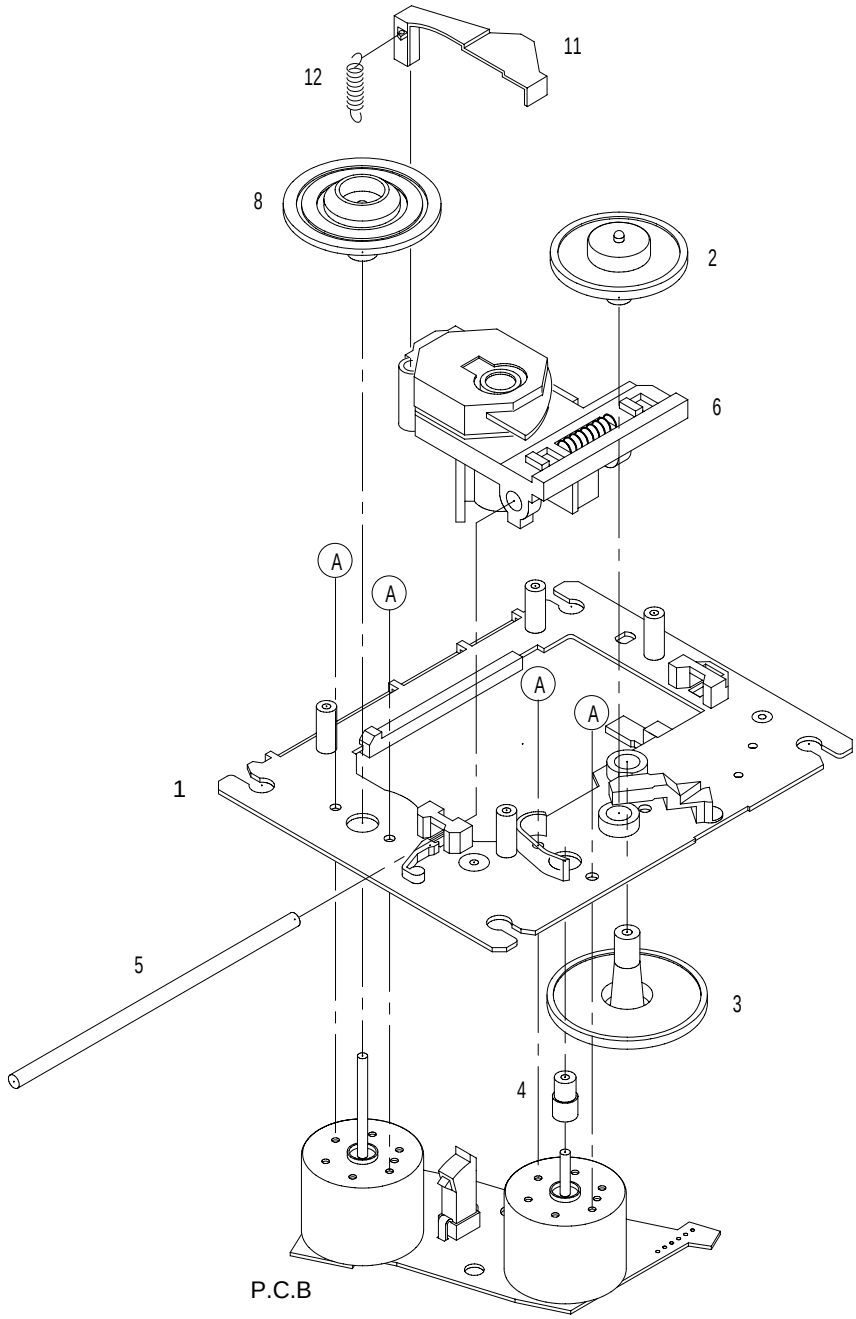


MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-239-210		PULLY,WORM N
2	84-ZG1-267-010		PULLEY,LOAD MO 8
3	81-ZG1-239-010		S-SCREW,TT
4	81-ZG1-291-110		GEAR,TRAY RELAY NO3
5	81-ZG1-271-010		S-SCREW MECH REAR
6	81-ZG1-277-310		HLDR,MAGNET N
7	81-ZG1-255-110		PLATE,MAGNET MK2
8	83-ZG3-213-010		LVR,SW
9	84-ZG1-003-310		TRAY,NO2-B
10	87-045-364-010		MOTOR(BCH3B14)
11	84-ZG1-005-210		TURNTABLE,NO1(*)
12	84-ZG1-011-010		REFLECTOR,CD
13	84-ZG1-259-010		SPR-P,WORM
14	84-ZG1-208-210		LEVER,CAM
15	84-ZG1-209-010		BELT,SQ1.8-117.7
16	84-ZG1-211-010		SPR-E CAM S
17	84-ZG1-215-410		GEAR,MAIN CAM BLU
18	84-ZG1-216-310		SLIDE,MECHA CAM YEL
19	84-ZG1-205-110		GEAR,TRAY
20	84-ZG1-206-110		GEAR,RELAY
21	84-ZG1-207-010		PULLEY,RELAY
22	84-ZG1-221-010		GEAR,MAIN TT
23	84-ZG1-238-010		GEAR,WORM N
24	84-ZG1-224-010		LEVER,TT
25	84-ZG1-225-010		BELT,SQ1.0-63.3
26	83-ZG3-602-010		RING,MAG
27	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
28	84-ZG1-248-010		SPR-C,WORM
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-251-070-410		U+2.6-3
C	87-342-036-210		UT2+2-8
D	87-067-981-010		BVT2+3-6 BLK

CD MECHANISM EXPLODED VIEW 1/1 (3ZG-2 E1)



CD MECHANISM PARTS LIST 1/1 (3ZG-2 E1)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-243-110		CHAS ASSY,SHT
2	83-ZG2-235-010		GEAR,A3
3	83-ZG2-205-210		GEAR,B
4	83-ZG2-236-010		GEAR MOTOR 3
5	83-ZG2-240-010		SHAFT,SLIDE 3
6	87-A90-836-010		PICKUP,KSS-213F
8	83-ZG2-233-010		TURN TABLE,A5
11	83-ZG2-245-110		LEVER,SHUTTER
12	83-ZG2-250-010		SPR-E,SHT 2
A	87-261-032-210		SCREW V+2-3

CX-NAK572
CX-NK270
CX-NK290
CX-NK370
CX-NK570
CX-NK765
CX-NK770
CX-NK970
DX-SNKH100

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
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G一　一	
G一　一	
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